Journal of Intercultural Management
Vol. **14** | No. **1** | **2022**
pp. **4–53**
DOI **10.2478/joim-2022-0001**

Kerstin Bätz
ISM International School of Management, Germany
ORCID ID: 0000-0002-6345-5104
Kerstin.baetz.2019@student.ism.de

Patrick Siegfried
ISM International School of Management, Germany
ORCID ID: 0000-0001-6783-4518
patrick.siegfried@ism.de

Reflecting on the Efficiency of Design Thinking and Lean Startup

Received: 20-12-2021; Accepted: 23-05-2022; Published: 27-07-2022

ABSTRACT

Objective: In this article, the methods used to simplify the business modelling and founding of new companies are presented and critically reflected. Furthermore, it is discussed to what extent a specific method is advantageous, disadvantageous, applicable, not applicable, or even contradictory.

Methodology: The theoretical analysis is underpinned by a qualitative interview study asking company founders about applying the methods mentioned above. The work is based on scientific papers and books and is complemented by the data originating from a specially designed study.

Findings: The results conclude that business model founding instruments provide strategic guidelines favouring entrepreneurs, yet they turn out to be minor in its real-life significance as numerous factors rooted in different fields of expertise play in.

Value Added: The added value of this paper is in the elaboration of efficiency bringing and risk-minimizing components of the methods, respectively. Accordingly, managers and entrepreneurs of all industries are intended to be equipped with sufficient information content that eases the decision for or against one of the methods as realistic expectations considering the application are likely to emerge.

Recommendations: The limitations of this study are rooted in the chosen qualitative research since every interviewee is a subject to their individual perception.

Key words: business model, entrepreneurship, Design Thinking, Lean Startup

JEL codes: E37, E39, L1, L2, L21, L221

Introduction

Entrepreneurship is increasing in popularity, contributing to the global economy's growth. Visionaries, game-changers, and challengers demand and facilitate entire industries' change through matured business model research and reflection (cf. Osterwalder & Pigneur, 2011; Christensen, 2000; Siegfried, 2014). Whereas the focus of management studies was previously centred on describing concepts, strategies, and tools for existing companies, it is now possible to refer to a collection of tools for drafting and sharpening business models (Blank, 2013). Numerous playbooks and academic resources exist on the market that business founders can employ (cf. Osterwalder & Pigneur, 2011; Ries, 2012; von Engelhardt & Wangler, 2019).

Specifically, the currently prevailing Covid-19 pandemic serves as starting point of novelties as it can be identified as a business megatrend forcing entire industries to restructure their economic core innovatively (cf. Lubin & Esty, 2010) towards crisis-resistant business models (McKinsey & Company, 2020a, b; Tidd & Bessant, 2013). Aspiring business founders should leverage that boost of shifting needs to design businesses that align with the future's economic requirements, accentuating digitized ecosystems, performing crisis-resilience (McKinsey & Company, 2020c, d). In that sense, this article's purpose is to critically reflect on instruments intended to help business founders drafting and sharpen their business model.

In the structure of this article, addressing aims and objectives comes first. After that, the analysis of the conceptual background follows. A detailed reflection critically examines Ries' (2012) Lean Startup (LS), and Kelley, Leifer, and Winograd's (2003) Design Thinking (DT) – providing in-depth information. Subsequently, a delineation of implications for the methods' added value and their issues are shown. The methodology guides the study's data conduction with the qualitative research method's approach. That output comprises interviews with business founders. After that, a discussion with managerial and practical implications for startups and this study's limitations will be addressed.

This research aims to focus on (digitized) startups and their gathering of knowledge to simplify the business model design process and commercial establishment while creating a competitive advantage from scratch. Derived from that, aspiring business founders can extract insights on which tool serves initially as the best state-of-the-art practice to visualize, understand, and present their business idea, tailored to individual conditions.

The study aims to identify critical aspects and benefits that must be considered while creating a business model applying the five methods examined. Thus, the overall aims unify identifying promising procedures, favouring aspiring business founders. The following objectives to achieve the respective aims are to identify pitfalls of employing the subject methods and to critically evaluate the use of the methods in their authenticity, and, equally, to draw transferable conclusions and implications.

To identify barriers throughout applying the methods, an extensive amount of literature will be referenced to generate a holistic reflection that provides valid information on benefits and pitfalls.

Overall, the objectives that shape this research will provide a chronological order that educates on employing the methods that could either be advantageous or detrimental to a company in its early stage.

Deriving from the aims and objectives, it is beneficial for business founders to know which of the five methods matches their cognition and business model best to attain and retain commercial vitality. The potentially resultant generating of competitive advantage underpins the significance of that education on the methods (Kim & Mauborgne, 2015; McKinsey & Company, 2020b; cf. Lubin & Esty, 2010; Siegfried, 2012). Beyond that, businesses and particularly innovative startups that build and shape the next decades' economy should be shown the derived, meaningful implications by reflecting on theory taught by the examples analysed (McKinsey & Company, 2020b; Siegfried, 2013a). Consequently, the following indicative research questions are intended to contribute to the closing of existing academic literature gaps in the context of building digitized business models:

1. Can (digitized) startups extract and demonstrate key facts of their business idea using solely one of the subject methods?
2. Is there a method that suits the digitizable platforms best?
3. Are entrepreneurial methods consciously exercised by founders of diverse business backgrounds?

Throughout this study, the questions above will be answered to clarify the methods' feasibility and appropriateness in the contextual sector. Accordingly, business founders (independent from their operating industry) will be equipped with sufficient information on employing the methods.

Literature review

In the following chapter, the conceptual background is dedicated to the analysis of the two subject methods in the entrepreneurial scope and/or depicts a digital ecosystem's establishment which is currently gaining importance:

- Ries' (2012) LS
- Kelley, Leifer, & Winograd's (2003) DT

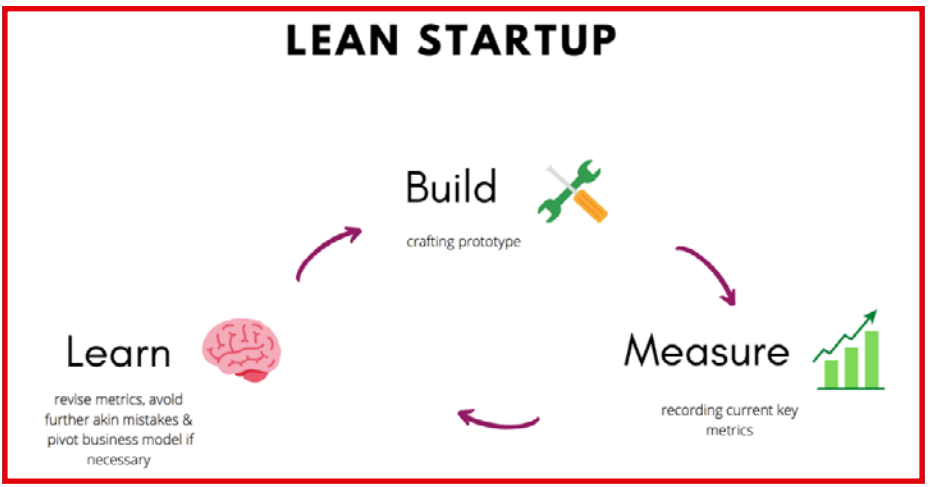
It will be critically discussed on their effectiveness for business founders to reflect of their effectiveness.

In the following text, a critical reflection on the feasibility and effectiveness of the LS (2012), and DT (Lewrick, Link, & Leifer, 2018) is elucidated. Furthermore, the analysis addresses the benefits but pitfalls that founders should take into account.

A critical reflection on the Lean Startup

"The lean process concept is focused on the removing of the waste and improving the efficiency of the development process" (Nidagundi & Novickis, 2016, p. 30). The LS that was created by Ries (2012) is based on the credo "fail fast, fail cheap, fail happy" (Lin, 2014, p. 1) and the core principle of the build – measure – learn iteration loops.

Figure 1. LS iteration cycle



Source: Adapted from Ries, 2012.

The overarching goal of the LS approach is thus the quickly validated learning to evade voluminous monetary and time losses as well based on business models that were developed divorced from customers. Ries (2012) recommends monitoring the process of progress and optimization measured in key metrics, which he refers to as the innovation accounting – practicing entrepreneurial accounting hygiene (Ries, 2012; cf. Chesbrough & Rosenbloom, 2002; Klein, 2013; Maurya, 2016; Siegfried, 2017). Throughout the iteration loops, a customer-centric and profitable business built upon reflection is to be designed with the flexibility to respond to unexpected emergent events. Also, it asks for founders' ability to absorb and extract data from customers and to transmute these into information and business features that encourage a company's success (Ries, 2012; cf. Cohen & Levinthal, 1990; Mintzberg & Waters, 1985; Wheelwright & Clark, 1992; Williams, 2014).

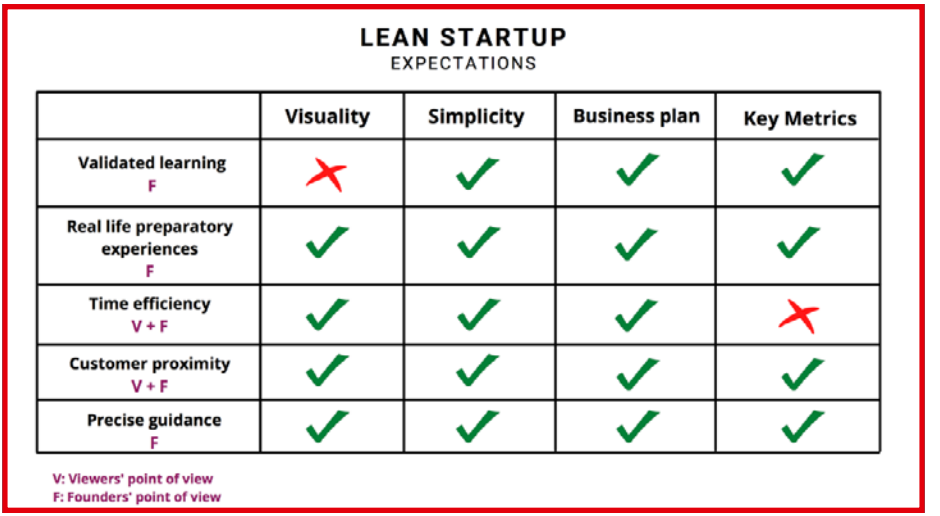
The distinctive feature of the LS method is that practice precedes theory. Traditionally, young companies are encouraged to create a business plan as early as possible, following Cooper's (2008) Stage-Gate Model (see Appendix 2) that displays the deliberate process from its idea screen up to its launch. However, this is countered by the fact that theoretical planning is often incompatible with

real-world circumstances. Thus, Müller (2018) criticizes, "But how reliable can a planning be that is made without product and customer experiences under great uncertainty for several years in advance?" (p. 47; cf. Bennett & Lemoine, 2014; contra. Kubr, Ilar, & Marchesi, 2016). In contrast, Ries's (2012) approach is supposed to ease forecasts for the next three to five years' key figures since the business model was designed proximally to customers. Moreover, as usual, business plans can significantly vary in their volume – often about 30 to 40 pages are enough (Pott & Pott, 2012; Siegfried, 2015a) – the LS helps to create a business plan that is based upon facts and validated by customers as opposed to hypothetical scenarios (Kubr, Ilar, & Marchesi, 2016; cf. Maurya, 2012, 2016).

Agile methods such as the LS method are more advantageous than the traditional approach with a business plan. Business plans often disregard the uncertainty of the unpredictable VUCA business landscape (cf. Bennett & Lemoine, 2014), in which 80–90% of startups fail (4investors, 2020), while the LS method is reactionary with accompanying flexibility in response to the unforeseen and customer insights (Blank, 2013; Ries, 2012; Müller, 2018; Siegfried, 2015b). Ries (2012) intended with the LS to create a novel opportunity for companies to exploit their success through customer assessment and the analysis of their needs. Resultantly, the real-life validation that the LS method is supposed to provide founders with what can be considered a sound fundament of a sound business plan. Beyond that, customer feedback's involvement can sharpen the business model since there can be an innovative competitive advantage in the long term. Furthermore, that is central to their needs due to customer's (early adopters) co-creation (cf. Kim & Mauborgne; contra. Carvalho & Yordanova, 2018). Additionally, if founders find themselves in a setting where they pitch for an investment, they can appear to refer to a heightened degree of credibility and reflectiveness as they gained experience that has proven to be proximate to forecasts.

The continuous repetition of iteration loops is seemingly intended to serve founders – but projects and collaborations of established companies either (Müller, 2018) – with the possibility to learn from mistakes and reassess those and their progress in the shortest timescale possible. Hence, the employment of the LS can evoke the following expectations, as shown in the Figure 2 below.

Figure 2. LS expectations



Source: Self-developed.

Since the LS is an iterative process, each founder can decide how many learning loops to go through. Unfortunately, a minimum or maximum number is not formulated. On the one hand, this can positively affect the learning process, as it is relatively detached from stringency, which could speak against the creative process of entrepreneurship (contra. Frederick, O'Connor, & Kuratko, 2016). However, on the other hand, this freedom of the learning process, which is neither determined nor fixed to a period of revisions, holds the potential of possible occurring stumbling blocks, of which founders who apply the LS method should beware of, due to lacking guidance in the execution (contra. Ries, 2012).

The LS is obtained by unfiltered customer feedback as customers will test the prototype and assess the added value of the early version presented (Ries, 2012; Verganti, 2011) – they become part of the creational value chain. That action is necessary as most customers do not know what they want until they experience it. Hence, the LS targets to create and validate an economically leverageable customer need (cf. Greve, 2010; Kaschek, 2014) even though the product and business model are not in their final stage. Applying company-internal absorptive capacity (Cohen & Levinthal, 1990) is a crucial element for

success: those businesses that observe and assimilate to the external environment's unpredictability by recognizing the value of latent unsatisfied yet existing customer desires survive economically in the long-term as strategic and practical skills are put in alignment with the customers (cf. Siegfried, 2017). This is induced through respective market research fostering a knowledge push, resultant in deliberately planned and structured novelties – incremental innovation (Pressfield, 2012; cf. Christensen, 2000; Rumelt, 2011; Siegfried, 2013b) – as intended by Ries (2012). Through assimilating to insights from customers that demand and foster innovation – lead users – and learnings of the early innovation's status while reinforcing its further development according to the organization's knowledge expansion (Herstatt & von Hippel, 1992; Isaacson, 2014; Tidd & Bessant, 2013; cf. Cohen & Levinthal, 1990), the attaining of early adopters is enabled.

Transmuting customers and the potential early adopters to a part of the value chain is psychologically advantageous for designing a customer-centric business model. According to Maslow (1943; see Appendix 1), self-actualization is the human psyche's highest need that can be activated commercially beneficial (cf. Habermann, 2008; Voloshinov, Matejka, & Titunik, 1973). Simultaneously, customers' ideas and feedback can either validate or refute an idea. Thus this step can be crucial for omitting monetary losses by companies.

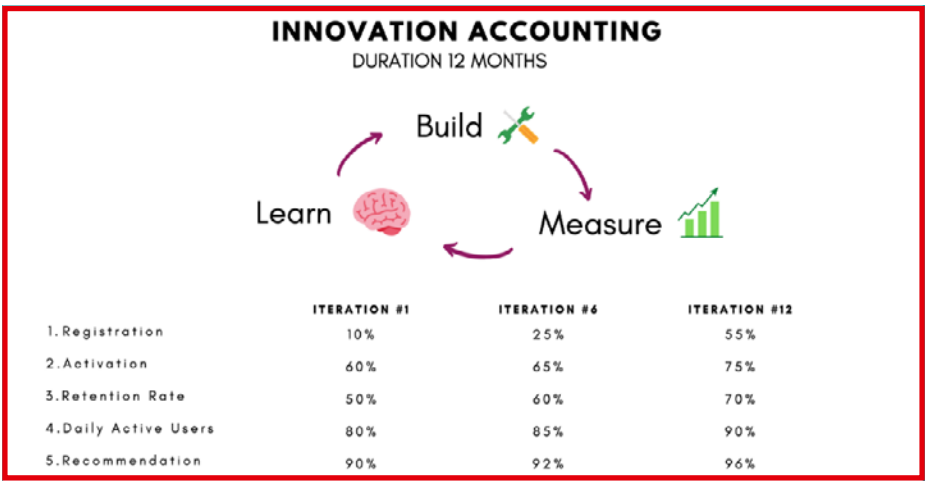
Moreover, it should be addressed that it can be difficult for inexperienced founders to identify reliable early adopters that provide insightful feedback. Thus, Stähler's (2019) suggestion should be followed here to seek other individual's opinions that are familiar with the target industry, which can yet be a complex undertaking in itself. Without such opinions, founders run the jeopardy to build a business model based on misguided customer feedback, leading to an economic failure (contra. Habermann, 2008; Voloshinov, Matejka, & Titunik, 1973).

Another relatively unconventional aspect of the LS is that Ries (2012) encourages founders to change their business model radically if necessary. On the founders' side, there is often an aversion to detach themselves from supposedly auspicious core elements of the aspired business model rooted in their initial enthusiasm and the experience of a confirmation bias – the impossibility to analyse the business model as objective as possible and to emancipate the

self from positive feedback due to extrinsic confirmations on the business's success potential (cf. Düsing, 2016; Nickerson, 1998). Experiencing this can result in a cognitive dissonance (Festinger, 1957) that might have a lasting negative impact on a company's optimization process and is not favouring the founders in a money-pitching setting (Düsing, 2016; cf. Deutscher, 2010; Fox & Levav, 2001; Nietzsche, 1888; contra. Kaplan, 1966; Rauch, 2013; Voloshinov, Matejka, & Titunik, 1973).

An instrument of Ries's (2012) favouring founders in a money-pitching setting is the innovation accounting that is a measurement of numerical progress parameters (cf. Kaplan, 1966; Kaplan & Norton, 1992; Voloshinov, Matejka, & Titunik, 1973). The respective innovation balance provides information about optimizations of the early product version. The "innovation balance leads to faster course corrections" (Ries, 2012, p. 139). A potential innovation accounting could look like the following Figure 3.

Figure 3. Potential innovation accounting



	ITERATION #1	ITERATION #6	ITERATION #12
1. Registration	10%	25%	55%
2. Activation	60%	65%	75%
3. Retention Rate	50%	60%	70%
4. Daily Active Users	80%	85%	90%
5. Recommendation	90%	92%	96%

Source: Adapted from Ries, 2012.

Each company must determine the appropriate parameters to measure milestones (cf. Drucker, 2006; Kaplan & Norton, 1992). Taking stock of one's progress proceeds in three steps:

1. Using the MVP to obtain accurate data.
2. Optimizing the parameters towards the desired ideal.
3. Weighing up a change, of course: "change or preserve" (Ries, 2012, p. 112).

A generally applicable formula for creating an innovation balance sheet is redundant, as external factors vary greatly in interaction with the business model. On the other hand, this freedom can promote unsuccessful innovation accounting.

In refusing or omitting to determine KPIs, the risk of missing and tracking accurate data about the business's progress increases (cf. Kalhammer, 2019; contra. Rumelt, 2011).

Tracking these metrics is highly relevant for a young business that operates in an increasingly VUCA economy where entire markets' conditions require innovative novelties to achieve a competitive advantage and economic longevity (Bain & Company, 2020/2021; Bennett & Lemoine, 2014; Kim & Mauborgne, 2015; McKinsey & Company, 2020a; cf. Chesbrough, 2006; Rumelt, 2011). Disregarding performance goals that can foster growth can even result in a startup's complete failure since that indicates the "Just Do It" (Ries, 2012, p. 9) mentality. Referring to Rumelt (2011), that mentality is a "Bad Strategy" (p. 7) since it deemphasizes the relevance of strategically planning a business's founding and execution phase and corresponding market research, detaching the self from the entrepreneurial duty (contra. Drucker, 2006; Mintzberg & Waters, 1985). "It may seem counterintuitive to think that something as disruptive, innovative, and chaotic as a startup can be managed or, to be accurate, must be managed (however, that entrepreneurial management is inevitable)" (Ries, 2012, p. 9). Additionally, working with KPI's and tracking these can teach potential investors about the pitching founders' ability to improve their managerial skills. Furthermore, it would tell how quick or slow progress is achieved, but only if the founders can identify potential risks and act accordingly (cf. Cohen & Levinthal, 1990; Ries, 2012; Rumelt, 2011).

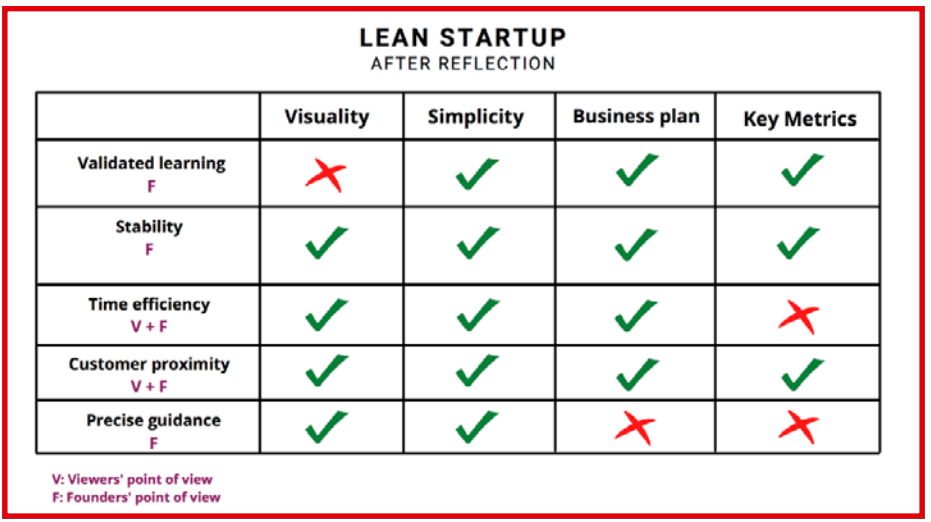
It should be reckoned that even a startup using Ries' (2012) approach to business creation is not a guaranteed factor for a company's economic success. It is to be regarded merely as a business founding aid. According to Müller (2018), agile, fast startups are often confused with dynamism and flexibility.

While both dynamism and flexibility are inevitable for the success of a young company that has to face unexpected customer demands again and again (cf. Greve, 2010; Kaschek, 2014), agility nevertheless requires stability (Müller, 2018). Startups often lack this stability due to the novel overall situation that can lead to team-internal problems as reported by 23% and financial problems by 29% of founders to heavily contribute to their startup's failure (t3n, 2016; StartUpWissen, 2020). That is an element that founders, who might enthusiastically follow the LS method, are unaware of, as the startup's opposing sides are usually only experienced after the initial euphoria.

Beyond, it is critical to consider that the LS method is compatible with companies of any kind. The LS was initially developed for business models of digital nature. Thus, it is questionable whether this method can be applied to tangibility-based business models or products. Digital business models can conveniently test agilely daily, e.g., an app can go through incremental optimizations from day to day. Therefore, digitalization is considered a catalyst for scalability (cf. von Engelhardt & Wangler, 2019; McKinsey & Company, 2020a, b, c, d), as marginal readjustments of an app or a website usually require only a short period.

In total, the LS method has the potential to provide particular, mainly digitized (aspiring) companies with meaningful insights. It is undoubtfully beneficial to design a business model proximal to the customer's vocalized demands. In contrast, the often only very vaguely formulated instructions of numerical measures, as in the innovation balance, are accompanied by the potential that founders applying the LS cannot pin down a point at which they should enter the market. Too many stretching terminologies can cause confusion, which is especially important in a barely predictable landscape (Bennett & Lemoine, 2014; cf. Deutscher, 2010; Nietzsche, 1888; contra. Kaplan, 1966; Voloshinov, Matejka, & Titunik, 1973) and can be detrimental. Thus, the following Figure 4 highlights the pros and cons of the LS.

Figure 4. LS after reflection



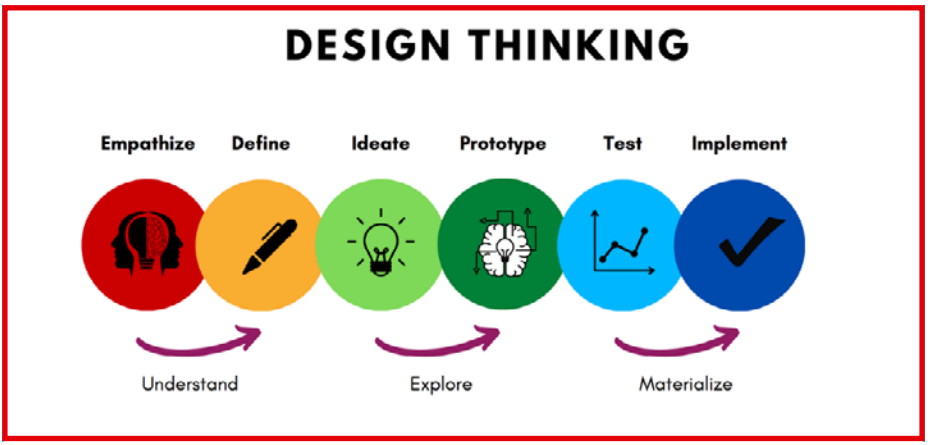
Source: Self-developed.

Although the LS method can generate entrepreneurial added value, the desired success is limited and dependent on the framework conditions in the subject business model and its founders.

A critical reflection of Design Thinking

"Created and developed by the design agency IDEO in the nineties, Design Thinking was the decisive factor to found the d.school in Stanford by David Kelley, Larry Leifer and Terry Winograd (in 2003) with support from the SAP-founder Hasso Plattner" (Grashiller, Luedeke, & Vielhaber, 2017, p. 241; cf. Kelley, 2016). DT is – according to its name – the creative, simultaneously agile path of a product or service designer of economically leverageable solution approaches where empathy for the customers is a required component that is transmuted over several stages into a feasible business applying knowledge and emotional intelligence (see Figure 5).

Figure 5. DT Stages

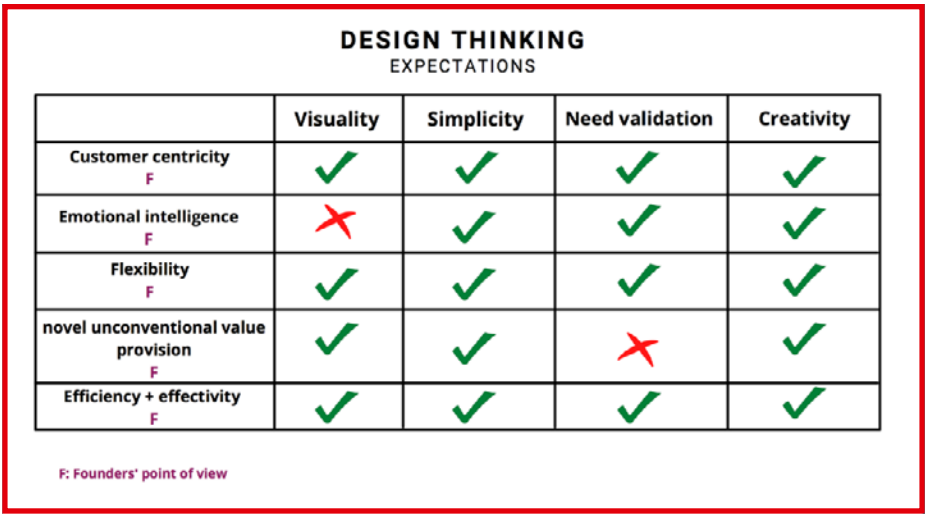


Source: Adapted from Lewrick, Link, & Leifer, 2018.

Besides, as creativity is undebatably prominent in this method, the initial generating of the novel, value-enhancing solution should unconventionally tend to take place intuitively, according to Lewrick, Link, and Leifer (2018), aligning with a designer's approach. The interactive processual method is supposed to help generate solutions to complex problems, following the credo "How can we learn more about a potential user and better uncover his or her hidden needs?" (Lewrick, Link, & Leifer, 2018, p. 17) The focus remains on linking needs with a business's feasible profitability.

Also, the method is intended to not only create solutions but innovation-driven business models (Lewrick, Link, & Leifer, 2018; cf. Kim & Mauborgne, 2015; Tidd & Bessant, 2013; contra. Carvalho & Yordanova, 2018), since the balance of product and service innovation can accelerate in a customer-centric manner. DT is arguably not supposed to be limited to specific application areas but applicable to business models across a wide range of industries (Lewrick, Link, & Leifer, 2018). Thus, reconciling creativity and structure should be feasible for digital business models which are gaining significance (McKinsey & Company, 2020a; cf. Bennett & Lemoine, 2014; Von Engelhardt & Petzolt, 2019). Accordingly, founders might have the following expectations using DT (see Figure 6).

Figure 6. DT expectations



Source: Self-developed.

According to Weinberg (2019), DT consists of three basic components:

1. Multidisciplinary teams
2. Breathing space
3. Iterative process

The multidisciplinary teams should consist of four to six people. The team members involved should not encounter each other in their weaknesses but complementarily in their strengths. In this way, they can learn to act cooperatively and in an solution-oriented way, contributing to each other's creativity by being open to new ideas. This is to happen detached from any competitiveness learned or even expected by society (Weinberg, 2019; cf. Di Cristini et al., 2003; Lewrick, Link, & Leifer, 2018; Pearce, 2003). Therefore, shared leadership and flat or no hierarchies in teams are beneficial (Pearce, 2003; Di Cristini et al., 2003; cf. Myers, 1962) and even promoted through DT. The idea of a collaborative team working for and with the same vision in mind (Sinek, 2009) is crucial to running a successful DT Sprint. That is because shared innovation leadership

is an apparent core theme, as the development of multidisciplinary teams is hindered by team members working past each other (cf. Weinberg, 2019).

One argument that refutes the notion of "A Team of Teams" (Weinberg, 2019, p. 43) is the oppression of the matrix-resembling team structure: it takes place with a spacious recreation area at which the various micro teams merge into a macro team through their verbal exchange. The implementation of that requires sufficient financial resources to provide a company with a recreational area. A startup like that (P) could rent an office in a co-working space since a startup in its pre-seed stage usually does not consist of multiple coworkers where several micro teams could be formed. Then, the team could interact with people from different startups in the co-working space, but that would not contribute to the DT's purpose as those from other startups are neither familiar with the subject business model nor with the subject DT sprint (cf. Frederick, O'Connor, & Kuratko, 2016; StartUpWissen, 2020; t3n, 2016; contra. Lewrick, Link, & Leifer, 2018; Weinberg, 2019). For this reason, the holistic practice of this method seems to be limited to large, mature companies and those companies with more excellent financial resources, for example BOSCH that successfully implemented DT as a creativity catalysator (cf. Weinberg, 2019).

At the same time, Weinberg (2019) lists another stumbling block of DT: the competitive mindset. Teaching institutions such as schools or universities – digital natives specifically – are still conveying an intensely competitive mindset to be beneficial for the career. That attitude is seen as a hindrance to DT (contra. Pearce, 2003; Di Cristini et al., 2003). The correct execution demands eliminating the apparent competitive confirmation bias (Nickerson, 1998) and familiarity bias (Fox & Levav, 2001). The issue is that emancipating the mind from that complex mindset and psychological structures can amount up to years (Durand, 2020), which expands a DT sprint that usually takes several days – a cognitive dissonance is present in the DT method (Festinger, 1957). Accordingly, even an experienced scholar along the lines of Weinberg (2019), who seemingly desires to inform about DT, contradicts himself. As a result, the invalid knowledge transfer is of little added value for those applying it (contra. Weinberg, 2019). Resultantly, if the formulation of DT is ambiguous, a loss of valuable resources such as time, but the missing

customer-centric and innovation-driven results can emerge (contra. Weinberg, 2019; Lerwick, Link, & Leifer, 2018).

The second component of DT is the breathing space that can be flexibly designed. That breathing space should be a spacious room where the sprints can take place. Here, the teams should be able to live out their solution-oriented creativity. The furniture necessary in that room is perceived as enough physical space to provide more potential for creativity's unfolding. In an optimal DT breathing space, nothing resembles a typical sterile conference room that does little to invite creative work. Instead, it is advised to provide lots of colourful pens, scissors, paper to write on and to create miniature prototypes to capture ideas – may it be a sketch or a crafted paper construct prototype. Besides, various whiteboards for visualizing different thought structures and attaching notes are supposed to strengthen the diversely positioned teams' communication and interactivity (Lewrick, Link, & Leifer, 2018; Weinberg, 2019; cf. Di Cristini et al., 2003; Pearce, 2003).

While this approach is logically comprehensible in theory, its execution does not always prove feasible for young companies, as not every startup immediately has its own office space (contra. Lewrick, Link, & Leifer, 2018; Weinberg, 2019). Nevertheless, in young, dynamic companies, this method can find appeal, as these are usually more open to new methods and, spurred by their enthusiasm, tend to enjoy creative, agile methods. Due to their flat hierarchical organizational structures, mature startups have the potential to benefit from the DT method to a particularly great extent, given the parameters of flexibility, little internal bureaucracy, and small teams where DT can be leveraged (cf. Lewrick, Link, & Leifer, 2018; Weinberg, 2019; Pearce, 2003; Di Cristini et al., 2003).

The third component of DT is the iterative process. It takes place in three stages that extend over six intermediate steps similar to Cooper's (2008) Stage-Gate Model (see Appendix 2).

Understand

1. Empathize

In this phase, the practitioners are requested to understand the target problem(s) of customers. The consultation of experts is advisable as they can provide helpful information. Furthermore, to holistically approach the customers' problems, empathy must be applied to be leveraged by creating personas. The personas are designed in various versions but always describe one potential customer profile's perspective and what problems that person has, even beyond the horizon of the subject business model's solution. The Design Thinker creates a persona examined from different angles to enrich the team's comprehensiveness. In that way, after introducing the other team members to the subject persona, the problem and its early solution can then be optimized and adapted to further customer preferences. The multiple personas created refer back to a diverse set of customers and their diverse pain points, emotions, happy points, and desires (cf. Frederick, O'Connor, & Kuratko, 2016; Kaschek, 2014; Lewrick, Link, & Leifer, 2018; Osterwalder et al., 2014; Weinberg, 2019) and supply the team with an in-depth understanding of them.

In contrast, even experienced Design Thinkers cannot entirely emancipate themselves from their thought constructs which is required to create a persona that is independent of a particular person one has in mind (Düsing, 2016; cf. Festinger, 1957; contra. Lewrick, Link, & Leifer, 2018; Weinberg, 2019). Also, how a person is perceived varies depending on the individual opposite (cf. Deutscher, 2010) as there is no universal formula for interpreting individuals (Nietzsche, 1888). Humans are always subject to their subjectivity, yet they are enabled to minimize but not eliminate it. Therefore, the point of objective perception, free from personal opinions about different individuals' perceptions, cannot be asserted, even though perceived as a requirement for the successful DT's execution.

2. Define

This phase involves gathering the previously obtained information and analysing the practical problems on a micro-level to define the severe problems that every sprint-participating member has to contribute to by providing subcategories of the overarching problems (Lewrick, Link, & Leifer, 2018; Weinberg, 2019). Here, it is advisable to structure the problems and the respective solutions logically on a whiteboard with sticky notes in subcategories to supply the entire micro team with an appropriate and easy-to-follow overview of the identified (Lewrick, Link, & Leifer, 2018; Weinberg, 2019).

The apparent issue here, however, is that there is no validation of the problems, as they are defined based on conjectures, which is not an economically justifiable approach (contra. Habermann, 2008). As a result, solutions were designed based on possible consequential errors (cf. DeAndrea, 2015). If followed Stähler's (2019) advice and adapt it as Lewrick, Link, and Leifer (2018) envision to seek direct discussions with customers in a stage as early, the subject company is enabled to circumvent this obstacle. Hence, the early validation of the identified problems is inevitable to omit for community-based startups (cf. Maurya, 2016).

Explore

3. Ideate

In this phase, Design Thinkers are prompted to chronologically exploit all the information from the previous two phases to design comprehensible solutions centric to the pre-defined problems. Besides, the ideas proposed are generated through brainstorming or brainwriting and should be introduced to the micro team through appropriate elaboration. The idea proposal pitches cover a maximum of 60 seconds each to convey essential information (Grashiller, Luedeke, & Vielhaber, 2017; cf. Seelig, 2015). The goal is to generate a large pool of ideas

(Weinberg, 2019; Lewrick, Link, & Leifer, 2018). That procedure enhances the incorporation of different ideas to examine and to merge these in the subsequent phases. Thus, the work of the ideation phase supplies a basic framework for the later outcome. Following this, the idea pool should also be presented in categories with respective subcategories on sticky notes on a whiteboard to ease the later phases' overview.

Seitz (2017) raised the criticism as while the process builds upon each previous phase in a linear, chronological fashion, the time constraint of fewer than 60 seconds can be problematic (contra. Weinberg, 2019; Lewrick, Link, & Leifer, 2018). The apparent time and action pressure can lead to an understanding of the ideas proposed, not reaching beyond the frame of that sprint. The Design Thinkers run the risk of lacking the ability to explain their ideas outside that sprint's setting. Externals would not follow the thoughts introduced due to the dynamic these emerged due to the pressure to provide potentially abstract solutions immediately. DT's work is primarily to construct representations in here that refer to a specific reality out there. "[...] At the point when the projection achieves the requisite amount of stability, erasure begins" (Seitz, 2017, p. 59). In simpler words, the creative solutions may be too abstract for compatible implementation despite the customer-centric focus. The required resources, such as money and legal constraints, are considered for the eventual final solution. Consequently, several ideas may be perceived as redundant for cognitive-heavy people or those who were not attending that sprint (Bourdieu, 1987; Seitz, 2017; contra. Weinberg, 2019; Lewrick, Link, & Leifer, 2018).

4. Prototype

The fourth phase of the DT prototype focuses on creating early versions of the final problem solution. The goal is to test, validate or falsify hypotheses that the prototypes are built upon, delivering the core of their added value. Here, the findings of the previous stages are implied as well. The prototypes created can be tangible or intangible but should always convey the particularly salient, ideally incomparable solution approach, requiring creativity. Unfortunately, it may

not be easy for every practitioner to demonstrate a complex idea in a sketch or paper construct. Nevertheless, the intention of a prototype is not to create a finished, fully functional early version, but only to convey the most significant features of the solution to be presented to third parties (Erbeldinger & Ramge, 2013; Weinberg, 2019; Lewrick, Link, & Leifer, 2018).

Each prototype ideally represents novel solution(s). The team can investigate and approach a suitable solution in a holistic, creative, and agile manner, following the lock-and-key principle, fostering later cost-efficiency. That results in successively discarding irrelevant ideas at the end of the prototyping phase and retaining, even merging, the promising problem-solving possibilities (Grashiller, Luedeke, & Vielhaber, 2017; Lewrick, Link, & Leifer, 2018; Weinberg, 2019). In contrast, it can be assumed that the subject Design Thinkers become aware of stumbling blocks, limitations, and potential risks of their prototypes through the iterative learning process on the ideas proposed.

Underpinning creativity and cohesion, the diversified micro-teams may well be beneficial (Lewrick, Link, & Leifer, 2018; Weinberg, 2019; cf. Di Cristini et al., 2003; Myers, 1962; Pearce, 2003; Pilcher & Richards, 2013), yet it is essential to consider Seitz's (2017) criticism on the potentially too abstract solution provision that third parties cannot always grasp. Furthermore, DT implies another contradiction: it deprives itself of the visuality that it thrives on. After the sticky notes, neatly and traceably placed in subcategories on a whiteboard or wall, are taken out of this framework, they are supposed to become prototypes. While this is a purposeful process, DT prototyping means that the notes are taken out of the construct of ideas and can no longer be logically linked. Thus, Seitz reports, "As I took down the sticky notes from the wall, I erased all of the connections that were made visible as the product ideas came together. A reversal takes place" (2017, p. 59). As a result, Design Thinkers would have to develop new framework conditions that must be given for the subsequent test phase. That revalidates the aforementioned paradox that DT solutions are often situational and understandable under time and action pressure but do not remain transferable to reality (contra. Lewrick, Link, & Leifer, 2018; Weinberg, 2019).

Materialize

5. Test

In the fifth phase of DT, the testing stage, the prototypes created previously are pivoted in their feasibility. The goal is to test to what extent the prototypes solve the problems identified in the empathize and define stages. Since the solution's feasibility is trialled in this phase only, adaptations take place. In the best-case scenario, the information provided in the first two stages will be revisited here to optimize the solutions, matching these with the insights gathered as DT proceeded (Grashiller, Luedeke, & Vielhaber, 2017; Lewrick, Link, & Leifer, 2018; Weinberg, 2019).

That is countered by the prototype construction, which can be based on consequential errors due to a lack of objectivity brought about by the use of empathy, such as in the creation of personas and a present cognitive dissonance of the practitioners (Festinger, 1957; cf. Fox & Levav, 2001; Jussim, 2012; Nickerson, 1998; Schmidt & Hunter, 1977), which prevents the ideal solution proposal, rooted in emotionality as methodology. Notwithstanding, "empathy [...] is an epistemological instrument of dubious quality that nonetheless plays an important part in [DT]" (Seitz, 2017, p. 40). Contrastingly, empathy is not a validated methodology that has been shown to help organizations scale significantly. Instead, it should be perceived as an additional tool in a manager's or founder's repertoire, not a fundamental principle enabling but potentially encouraging peak commercial success.

Empathy for the different target groups would help create a platform according to its diverse users' needs and desires. However, that empathy should not remain a persona but factual information extracted to be employed and transmuted logically. In that way, if respective amendments are undertaken, it could be tested if the data extracted were transmuted accordingly or if a revision is necessary. Hence, referring to empathy is not enough but can help find a direction for a problem, albeit that direction must be based on sufficient data.

6. Implement

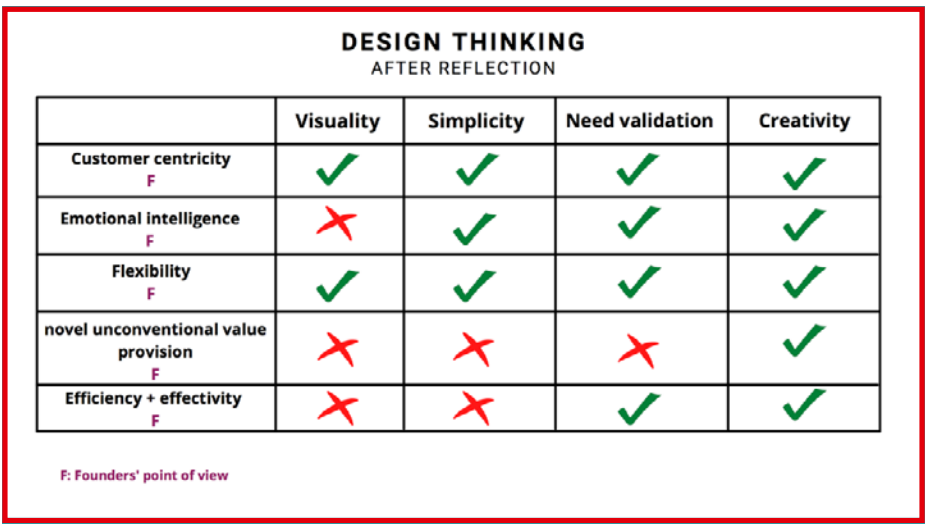
In the implement phase, the optimized prototype is implemented in the actual business model (Lewrick, Link, & Leifer, 2018; Weinberg, 2019), considering the information on the prototypes' hypotheses from stage 4. At this point, the actual demand for the finished product is shown since the finished result could not be tested beforehand. Nonetheless, founders should prepare for the unexpected. The startup 6Wunderkinder, founded by Frank Thelen, released a prototype called Wunderlist, an intuitive and straightforward project and time management tool. Customers liked the prototype, but the final product, called Wunderkit, enjoyed less appeal. The team went back to the prototype, made it mass-marketable, and built a successful company (BUSINESS INSIDER, 2015). Consequently, a potential loss of resources (time, money, human capital's involvement) should be considered since there is no guarantee of a prosperous DT sprint (contra. Habermann, 2008).

DT can be greatly relevant for young companies, as the application is expected to deliver fundamental, radical innovations (cf. Tidd & Bessant, 2013) but also approaches that will help sharpen the focus on customers' needs. Furthermore, its internal use implies the increased potential of supplying the emergence of a solution-oriented corporate culture – similar to the Japanese kaizen principle, where the pursuit of continuous performance improvement is strived for (Weinberg, 2019; Medinilla, 2014). DT rather envisions radical novelties within a business model (cf. Grove, 2009; Verganti, 2011; Tidd & Bessant, 2013) than realizing incremental improvements, as intends to restructure entire processes within a company, leveraging emotional intelligence since employees are introduced to a new way of approaching problems and solutions.

Overall, the DT method can be seen as a creative measure for identifying agile solutions that can intrinsically strengthen teams (cf. Pearce, 2003; Myers, 1962; Pilcher & Richards, 2013; Di Cristini et al., 2003). It also encourages the consideration of unconventional actions. Nevertheless, in practice, DT reaches its limits in financially and spatially limited startups, which raises doubts about its feasibility for young and small companies with only little budgets. Unfortunately, the method has some contradictions, which hinder the practical

implementation of it. The iterative process, which Ries (2012) advises either, is promising in error improvement. Thus, the method unifies cognition and creativity. In contrast, DT thrives on the experience of creativity, less on understanding it. This is countered by the interactive process, which is intended to promote creativity and mental flexibility. To help founders in their decision for or against the use of DT, the following table (see Figure 7) allows reflecting on the pros and cons.

Figure 7. DT after reflection



Source: Self-developed.

Comparison of the methods and implications

LS (Ries, 2012) is based on validated learning, from which startups can benefit to sharpen their business model conditioned by feedback from early customers. In this way, budding entrepreneurs simultaneously create proximity to initial customers, who can become early adopters who, in the best case, attract further customers. Consequently, this method is promising for internal optimization purposes, which shows the founding team its development but can be

secondarily leveraged for investment pitches on the condition that persuasive performance progress is present. That means that at least derivatives of LS can be used for third parties (cf. Alpar, Koczy, & Metzen, 2015; Herzberger & Jenny, 2017). However, it must be added that the LS method is based on a range of uncertain parameters such as periods, numerical assumptions (uncertain metrics), and broad freedom of interpretation. Therefore, on the one hand, it can be easily misinterpreted what the incorrect execution of LS would entail, but it can also cause the founders to lose focus since much is vaguely formulated.

DT (Lewrick, Link, & Leifer, 2018) is intended to help company founders deal empathically with their customers' problems. This method can certainly help create a business model as a deeper understanding of the customer emerges, which is not tied to feeling the same emotions as customers but instead the ability to understand what their solvable problems are. Here, the first customers can be identified through recommended interviews with early customers, which favours first income. Therefore, DT should be limited to internal use initially, and results can be presented to third parties only if the customer insights and problems have been validated to be true. Third parties cannot benefit from subjective assumptions of a persona and deepen their understanding of the specific business model presented (Bhargava & Herman, 2020; contra. Lewrick, Link, & Leifer, 2018) through empathy for customers. Thus, the lack of relevant metrics indicates further fractures. Without sufficient numerical data sets, it is difficult to capture the potential of a business and the founders' skills. Hence, it is unlikely that investors would show interest in investing if only DT were applied, as not even a growth plan was shown.

Comparatively, probably the most advisable method from the comparison of DT (Lewrick, Link, & Leifer, 2018) and LS (Ries, 2012) represents a blend of either approaches. Although LS (Ries, 2012) already takes up elements of DT (Lewrick, Link, & Leifer, 2018) due to the customer-centricity, early validation, and pivoting through customer feedback, even more in-depth elements for customer understanding can be included in LS (Ries, 2012). If, for example, personas or stakeholder maps with their associated pain points were included, a holistic mean of capturing and sharpening the business model can emerge, as LS (Ries, 2012) presupposes the metrics that DT neglects. Beyond, DT (Lewrick,

Link, & Leifer, 2018) is intended to find creative ways of solving a problem. That knowledge can be applied to a novel business model, yet it is less based on validated, numeric learning as opposed to LS (Ries, 2012) that incrementally intends to guide entrepreneurs to the quick founding applying diligent entrepreneurial hygiene that does not necessarily give creativity as much space.

It is questionable whether factual drivers of success exist at all in an increasingly VUCA business landscape (cf. Bennett & Lemoine, 2014), especially under the premise of the currently prevailing Covid 19 pandemic (Lubin & Esty, 2010) that leaves diverse industries in unforeseeable conditions. Therefore, companies are forced to re-evaluate their success drivers holistically and individually. While the methods presented can deliver new impetuses or even guidance in establishing the business, they should not be perceived as promising success tools because too many external factors not captured by the methods presented can determine success or failure. The most crucial aspect of a business is its founding team and its vision that is not considered in any of the five methods (contra. Sinek, 2009; cf. t3n, 2016; StartUpWissen, 2020). This emphasizes that founders should not rely on methods only but consult more appropriate means. In the end, each method is only as effective as the founding team using it.

Research methodology

In the following chapter, the methodology's research approach is elucidated. Qualitative data are obtained through interviews with business founders, reflecting on their founding process and ascertaining whether theoretical founding methods were used. To wholly depict this study's methodology, ethical core principles such as ontology are addressed as well.

Qualitative research

The primary qualitative research's chosen design is cross-sectional, with the principal goal of identifying potential vital drivers of success and promising entrepreneurial methods. Hence, the data collection method of choice is a semi-structured interview administered personally to business founders (cf. Bryman, 2012).

Semi-structured interviews are scientifically validated and a popular method of conducting qualitative research data based on a relatively conventional interview style. An issue-focused interview is appropriate for collecting primary qualitative data as it intends to leave the subject as much space as possible, similar to an open talk (cf. Bryman, 2012; Saunders, Lewis, & Thornhill, 1996). Moreover, semi-structured interviews are not overly focused on criteria such as replicability, internal validity, external validity, and measurement validity, like quantitative research designs (Bryman, 2012). However, part of the research's fundament is respecting the ethical core columns of research that imply the subjects' voluntary participation, anonymity (if desired), confidentiality, and the freedom to withdraw. That so-called ethical ontology is inevitable to consider throughout the conduction and analysis of qualitative data.

The most prominent issues in semi-structured interviews are the interviewer's interpersonal level to the subject as the interviewer and subject can influence the opposite mutually. That must be considered throughout the process of data collection and analysis to keep the determinants' level of complexity on its minimum (cf. Bryman, 2012; Saunders, Lewis, & Thornhill, 1996). However, potential problems are inherent when conducting an interview. Also, lacking time and trust can be detrimental to the research. Both can affect the subject's opinion as essential facts can be withheld by the subject and lead to a non-representative study as either can lead to an incomplete data set. This means that an insightful interview must create rapport initially and schedule each interview appropriately to avoid a non-reliable outcome. Starting with mild questions first and ending with rather complex issues can therefore be beneficial. Moreover, asking short and precise questions allows the researcher a more comfortable and efficient analysis of the answers (Berg, 2006; Bryman, 2012; Myers, 2009; Myers & Newman, 2007).

However, the subject's opinion can be manipulated psychologically on a linguistic level by external factors such as the interviewer's linguistic framing of questions (cf. Smith, 2013; Whorf, 1956; contra. Nietzsche, 1888). Such actions can be contradictory to the desired outcome of reliable research. They would simultaneously nurture a cognitive dissonance that each researcher must beware of individually, as they would reject to conduct the study with openness to outcomes other than expected (Festinger, 1957). The withholding of crucial facts by the subject should be evaded to generate valuable, non-biased qualitative data set (Bell, Bryman, & Harley 2018). Accordingly, cognitive dissonances can foster the emergence of the test bias (cf. Schmidt & Hunter, 1977) that can falsify data aligning with the desired (cf. DeAndrea, 2015; contra. Hofstede, 1980). Consequently, wording, compliance, style, and sequence are dependent on the researcher's linguistic construction (contra. Kaplan, 1966; Nietzsche, 1888; cf. Voloshinov, Matejka, & Titunik, 1973) of the questions that are interdependent on the subject's education, ethnic and cultural background, age, and social status, respectively (cf. Bryman, 2012).

In general terms, the qualitative research's conduction aims to understand and present the interview data gathered profoundly. The result is achieved through the critical reflection of contextual determinants such as proficiency, age, gender, and professional experience of the subjects (cf. Saunders, Lewis & Thornhill, 1996), similar to the linguistic construction. Also, a critical evaluation will enhance transferability, dependability, confirmability, and credibility. This contributes positively to the research's quality (Bryman, 2012) to find out whether entrepreneurial theoretical methods greatly favoured the subjects regarding establishing their businesses.

Sample group

The study's chosen sample group comprises 15 business founders of diverse backgrounds and different company stages to present a reliable outcome. Each interview was conducted via video calls to ensure time efficiency and

respect the present Covid-19 restrictions. Furthermore, to refer to meaningful insights that contribute to the results' validity, 5/15 interviewees are successful business founders with media presence in the entrepreneurial context and respective funding expertise – high profiles. The founders' companies refer to diverse economic maturity levels: from initial operational activity, founding an entrepreneurial university chair for ethnic minority groups, up to initial public offer. However, following a proper ontology hygiene, each interviewee will be kept anonymous.

Semi-structured interview guideline

An issue-focused, semi-structured interview intends to leave the subject as much space as possible for replying to the questions. Nevertheless, regarding this research's conceptual background, it is centred on the usability of established entrepreneurial founding methods and tools (cf. Mayring, 2002). When designing interview questions for the semi-structured interviews, the first step is to make a draft that broadly reflects all relevant topics. In this study's case:

- personal background related to the occupation
- business creation and founding
- realizing and scaling of the business

Each of these categories is filled up thematically with three up to six questions. Here are the fourteen formulated questions:

Personal background:

1. What is your profession?
2. Since when have you been working in that position?
3. Can you briefly sketch your professional development?

Business creation and founding:

4. Did you use an entrepreneurial instrument, e.g. LS for developing your business model?
5. Were there any obstacles experienced throughout that particular process?
6. If you experienced obstacles, how did you overcome them?
7. For new founders, and knowing what you know now, what would you consider the most important key factors for developing a business model?

Realizing the business:

8. What were the first steps you took to realize your business?
9. Would you recommend retaking these, or would you do it differently?
10. What challenges and issues did you have to overcome in the realization phase?
11. What were your implications from these mistakes?
12. In your opinion, what entrepreneurial principles, strategies, and methods helped you make your startup successful?
13. Referring to your experience and the current challenging economic circumstances, what should today's entrepreneurs be aware of when building their business?
14. Reflecting on your entrepreneurial journey, what are you the proudest of?

The questions' objective is to point out the conjunction between the subject's answers and the viewpoint on specific topics as the subject has intricate knowledge (cf. Mayring, 2002). This cognition entails explicit assumptions that the researcher can apply to open questions spontaneously, e.g., requesting elaboration on specific criteria given to question 13. Also, implicit assumptions are considered either. Thus, they should be supported by methodologically providing elaborative aid by asking diverse questions that reconstruct the subject's theories on the study. The four required categories of questions included are as follows:

- probing questions
- throw-away questions
- extra questions
- essential questions (Berg, 2006; Flick, 2011).

At the beginning of an interview, throw-away questions are often used to ease rapport-building. Hence, they do not necessarily contribute to the central aim of the study. In this thesis's case, the throw-away questions refer to questions 1, 2, and 3. Throw-away questions can either be general questions – here asking for the subject's position – or demographic questions, e.g., asking for the subject's sex affiliation. Nonetheless, they can regulate an interview's pace or focus, justifying their necessity (Berg, 2006).

Essential questions solely target the focus of the study. They are somewhat scattered over the interview (cf. Gray, 2004). Nevertheless, they show a linkage to gather precise information that contributes to the study's focus, as seen in questions 4, 6, 9, 12. Furthermore, essential questions refer to the study's core and its result (Berg, 2006; Flick, 2011).

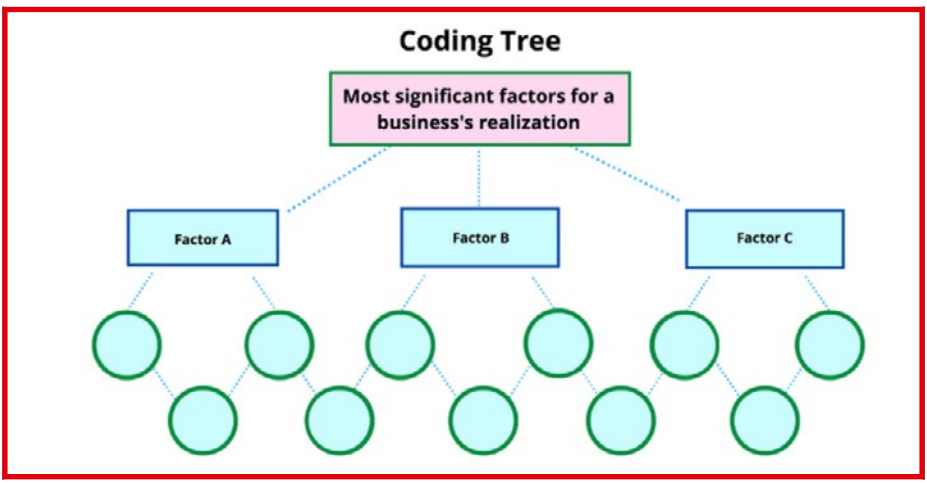
Extra questions are connatural to essential questions. However, they are not identical, as some wording is changed for the phrasing of additional questions; in this case, questions 5, 10, and 14 (Berg, 2006). The reasoning behind it is to examine to what extent a change in wording shifts the answer. Additionally, further questions test the answers' reliability (cf. Gray, 2004).

Probing questions or probes refer to another question answered before the current. Here question 6 is probing the answer given to question 5. Probing questions invite the respondent to elaborate on the information given earlier. The probing questions' usage allows the interviewer to gain a richer understanding of the subject's statements (Berg, 2006; cf. Gray, 2004).

Results and discussion

Content analysis is a common approach to analyse literature (cf. Kuckartz et al., 2007). In this case, it is applied to interviews conducted with business founders. Employing the MAXQDA software equips the study with the interviews' transcription necessary to derive analyses. Beyond, using MAXQDA eases identifying the most frequent emerging terms through the search option for keywords that allows for coding categories. The interdependencies can be visualized in a coding tree afterward (see Figure 17) – simplifying the evaluation of the semi-structured interviews as the intention is to minimize the text material (Kuckartz et al., 2007; cf. Bryman, 2012). Accordingly, a coding tree quantifies qualitative data based on its content.

Figure 8. Coding Tree



Source: Adapted from Kuckartz et al., 2007.

Hierarchical coding systems of that kind provide researchers with the appropriate instrument to visualize the relationships between overarching topics and qualitative interview insights. Consequently, these relationships take on the form of not only categories but their respective subcategories either (cf. Bryman, 2012). Thus they add trustworthy value to the study and

the expected result of providing knowledge about the feasibility of entrepreneurial methods in real-life scenarios (Kuckartz et al., 2007; cf. Saunders, Lewis, & Thornhill, 1996).

Results

In the following section, the results of the qualitative study will be presented. Furthermore, the research method applied will address the pros and cons of the deployed proceedings.

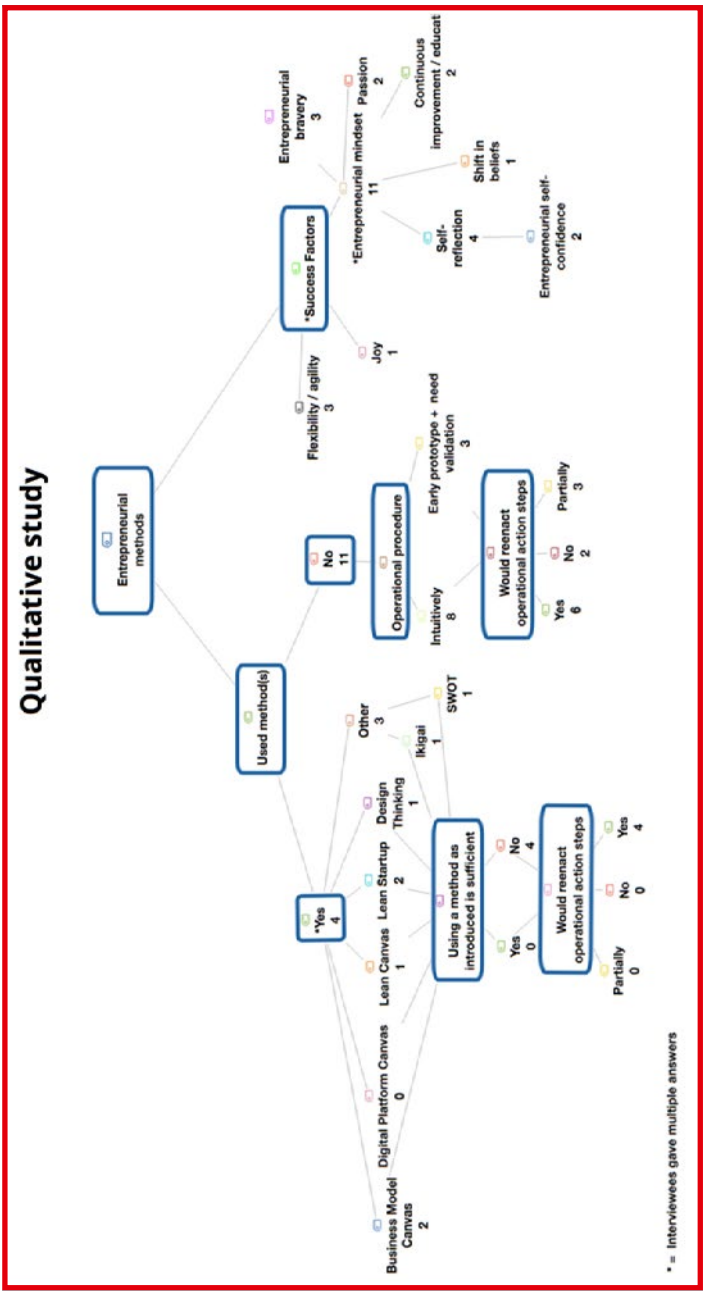
Qualitative research: interviews with business founders

The qualitative research comprises a series of interviews with founders; the information can be filtered out that 15/15 interviewees stated an early validation of the business idea or the customer need is of highest relevance.

Evaluation of the interviews

From the qualitative research collected, which was quantified using the coding tree, only 4/15 interviewees used 3 of the methods analysed (see Figure 9).

Figure 9. Evaluation of the interviews



Source: Self-developed.

In addition, 2 of the interviewees stated that they had used SWOT analysis and the Ikigai method, respectively. Therefore, based on the present study results, the established methods are not used as prominently in real founding cases as the theory would suggest. The statements of the interviewees support this. Throughout the conduction of interviews, it turned out that none of the method users would rely exclusively on a single method's execution. Instead, those founders who used methods understood them as a guideline or a starting point. "So, I always have to know the ignition switch that I use very gladly at the beginning with a product idea teams together. But I have also adapted changed it somehow, and I have that to speak as a model in my head. And then I know that, that the image can still tell me something about it, and that's like such a mental image" (Interviewee 4, 2021). Therefore, it can be assumed that entrepreneurial reason is required for reflection in order to be able to apply learned methods emancipated from theory and applied to the founding case. Thus, while the founders appreciate the thought-provoking impulses presented to them by a method, they still transmute it to fit their product or service and other framework conditions.

It is remarkable that even though every 3 founders that employed the methods analysed made changes to fit their situation because the methods did not entirely reflect the needs of their founding case, nonetheless they would still repeat the action steps they took at that time. However, this may be primarily related to human and entrepreneurial maturity and recognition of the learning process, considering the resources available at the time. Less can this be attributed to the sole guarantee of success of the methods. "So I believe that, yes, I would do that again, I will do that again. But of course, I [would do] this slightly better because now I have an idea of how to go about it. And, of course, expand my network's Joint Entrepreneurship Association's entrepreneurial networks rights. And I think that would help me" (Interviewee 1, 2021).

Regarding the 11/15 interviewees who did not use a theoretically elaborated method, it can be stated that they started intuitively (8/11) or with early need validation and the associated prototype (3/11) in the business model development and realization phase. It must be emphasized here that early validation is also part of the methodological processes analysed. Therefore, it can be assumed that those founders who decided not to use the methods are not

familiar with those methods and are often presented in an academic context. “I did it more intuitively […]. The exciting thing about it is more […] in retrospect, as I then developed this, sometimes I found out [...] that there are models already out there, but I have been using them intuitively for myself for years” (Interviewee 2, 2021). On the positive side here the founders could link their entrepreneurial reasoning with their intuition. It turned out that acting intuitively does not exclude ways of acting using established methods. It became clear that the methods presented were known to a total of 6/15 interviewees – those who had studied business academically.

However, what is striking here is the distribution of the percentage about whether the company founders would repeatedly act in the same way. While six interviewees answered in the affirmative, two answered in the negative, and three would do so again to some extent. This may be due to the lack of knowledge about standard startup procedures taught in the academic context, but it may also be related to a founder’s need for optimization and hunger for success, which is, however, uncertain.

It was therefore of utmost importance to find out which factors the founders said helped them. Three interviewees stated that flexibility was of great importance, especially concerning the Covid-19 pandemic, while only one interviewee named the joy of founding a success factor. However, 11 interviewees referred to the entrepreneurial mindset, which was named as a driver for success. However, this category was further subdivided into self-reflection (4), entrepreneurial self-confidence (2), shift in beliefs (1), continuous improvement/education (2), passion (2), and entrepreneurial bravery (3). Based on the available data, it can be seen that the founders’ thought patterns made a decisive contribution to their success, irrespective of their academic degree and academic economic calibre.

Discussion

In the following section, theoretical as well as managerial implications are explained. Furthermore, limitations that may invalidate this study’s results are addressed.

Limitations

Each study has a limited research quota, and this study also encounters limitations that call into question the validity of the research findings. In the qualitative interview part of this study, open-ended questions were used to ask about resources, methods, or strategies that were perceived as helpful, for example the Business Model Canvas or Lean Startup, since these are the most widespread and the interviewees were not to be restricted too much in their response radius or even manipulated. Nevertheless, it must be criticized here that the three other methods analysed did not receive equal prominence in the survey. Thus, it is possible that although Design Thinking was not explicitly asked for as a tool, this method was nevertheless pursued. The possibility exists that this merely did not immediately occur to the interviewee.

Furthermore, it can be criticized that the qualitative study was not conducted in person due to Covid-19. The physical perception can allow the attentive interviewer to ask even more detailed questions at appropriate points, contributing positively to the research result.

Moreover, the composition of the sample group is not free of criticism as only 3/15 interviewees were men and only 1/5 high profile interviewees was female. Thus, especially concerning gender equality, the composition of the interview partners is questionable since daring statements such as “primarily male entrepreneurs make it to great success” could arise. Another flaw of the sample group’s composition lies in the high profile’s academic background: every single high profile interviewee has a degree in economics. They were supplied with a subliminal set of potentially meaningful criteria to decipher what elements of founding a business are useful.

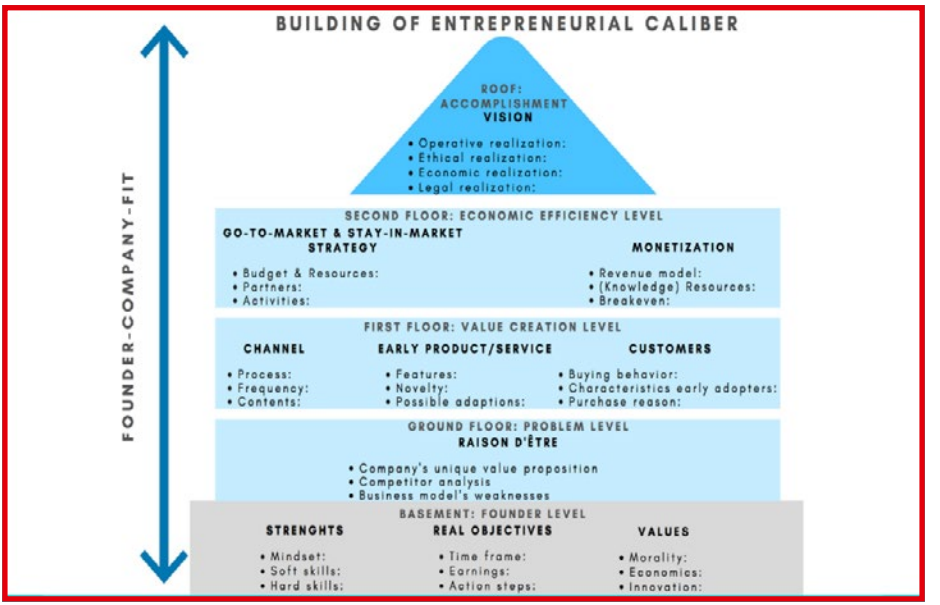
Conclusions

Theoretical implications

For theoretical purposes, the present findings of the methods presented have their raison d'être, as they provide founders with principles and procedures that can simplify the startup process and stimulate risk minimization. Nevertheless, there are gaps in the methods presented, especially considering the mindset that 11/15 interviewees (Figure 18) consider essential. Moreover, none of the methods presented comprehensively addresses entrepreneurial rationality and the emotionality of entrepreneurial spirit in equal measure. Elements of Sinek's (2009) Golden Circle or the Japanese Ikigai (Mogi, 2020), which deal with the founder himself and his creational ambition, are not involved in the methods presented. That denotes that research question 1. has to be negated as employing solely one method as presented is insufficient based on a digitized business's multidimensionality. Furthermore, it is impossible to formulate a generic statement on the best practice method; best practices always rely on the founders' subjective preferences and the degree of their founder-company-fit (see Figure 19).

Even among investors, the personalities behind a startup are receiving more and more attention; it would therefore be advisable for founders seeking guidance to use a framework that illuminates economic rationality and competitiveness in the same course as the entrepreneurial mindset, so that in the end the vision behind a startup can be realized by the founder-company-fit. One such framework is the "Building of Entrepreneurial Calibre" (see Figure 19; self-developed, 2021), explained in the following part. For a sufficient elaboration on each building blocks' component, an article solely dedicated to the framework should be considered, which exceeds this master study's frame. Here, each floor represents a separate microanalysis within an overarching macroanalysis.

Figure 10. Building of entrepreneurial calibre framework



Source: Self-developed.

The framework sees self-reflection at the founder level as an indispensable asset. This is because the whole business finds its origins in its founders; it is the least that the entrepreneurs critically deal with themselves as a startup always entails an increased risk compared to a permanent position. Therefore, founders are encouraged to reflect on their strengths, tangible goals, and values. In this way, strengths can be optimized by leveraging values embodied in their actions to pursue their objectives. Also, from a psychological and managerial point of view, it is advisable to consider in-depth (self-)reflection as entrepreneurs are aspiring leaders and/or managers who – if desired success comes in – are obliged to be responsible for their team members. Accordingly, those who are accountable should be the most credible and resilient, empowered through a mentality of intrinsic demand and openness for optimization.

The problem level points out existing economic blind spots that allow the business model for realization, providing space for defining the raison d'être – including the competitor analysis. Beyond, the problem level requires founders

to conduct an in-depth analysis of the business model's weaknesses, demanding entrepreneurial maturity and honesty to build strengths upon. Simultaneously, addressing weaknesses prepares the founding team for the undesired yet likely event of copycats or outperforming companies' emergence.

The subsequent value creation level addresses the monetizable product/service. The diverse channels through which the new added value is distributed (Siegfried, 2021), and the customers and relevant characteristics are the centre of this building block highlighted. Founders must differentiate channels between logistics and marketing streams as each requires different execution strategies. Furthermore, to prepare for the following startup stages, possible business model adaptions that might not be realizable in the beginning should be addressed here. Concentrating on customers, the framework asks founders to identify whether the majority is relatively emotional or rational in their purchase behaviour, enabling further analysis, such as characteristics of early adopters or the purchase's reason that can be divergent from the expected.

At the level of economic efficiency, it becomes more specific in the sense of conventional economics, since here the go-to-market and stay-in-market strategy and the monetization are underpinned with essential data. That level of the framework is intended to help acquire first investors, as here dramaturgically building on the previous levels, a comprehensive and self-contained framework of realizable and concrete action steps for the business can be a comprehensive and self-contained framework of realizable and concrete action steps for the business taken. Also, investors are supplied with a more profound understanding of the founding team's economic mentality, as information on the point of breakeven, existing partners/business allies that might reduce the investor's work or serve as warning signal assist in the investor's assumption on how much of their resources such as time, money, network, strategic calibre is needed.

With the level of accomplishment, the company with its vision, which serves as an overarching guideline, will enter the market through operational realization in ethical, economic, and legal duties. Across the use of this framework, the prime objective for founders is to equip themselves with a more comprehensive guiding tool and experience their founder-company-fit, so that potential adaptations of any nature can occur and the chance of sustainable success is maximized.

Managerial implications

From a manager's perspective, the implication is that neither a validated path nor a framework or model promise a startup's success. The frameworks analysed, intended to streamline the successful founding process and make monetary losses as avoidable as possible, serve as a guideline that founders who feel lost in the flood of literature and workshops can use, but founders should perceive these more as an aid, less as the rule of law. Especially in an entrepreneurial case, changing framework conditions are expected, which cognitively reduces the strict implementation of a method. That could be one of the various reasons why only 3/15 founders interviewed consciously applied methods to ease their founding process – limiting the range of answers to research question 3 on the feasibility of entrepreneurial methods. Therefore, the art of entrepreneurial management lies in realizing creative flexibility and astuteness combined with strategic procedures. The managerial mindset of a founder should therefore be coupled with reflective behaviour and a willingness to emancipate oneself from established thought patterns and approaches "[...] it is just very much about letting go of old behaviours, to open up for the new" (Interviewee 4, 2021).

Consequently, and referring to research question 2, there is no best practice model or framework neither for a digitized ecosystem nor for any other business model as too many inconsistencies play in. Factors such as the founding team itself, resources available, and entrepreneurial maturity that cannot be measured uniformly determine a startup's success or failure, which is applicable for using a specific model of framework. As Interviewee 4 suggests, success drivers from existing research should be implemented and adapted to the challenges of the current economy.

Moreover, primarily referring to the qualitative research, it is apparent that creative flexibility is necessary but still complementary to necessary facts. These facts may be especially relevant for a prototype. For example, managers in a startup setting can tap into the fact that extensive research and work performance are relevant for a convincing prototype as possible learning for themselves, but the "start before you are ready" (Interviewee 3, 2021) should not be underestimated either. For entrepreneurs, it is of unspeakable relevance

to be open to new ideas and feedback. The burgeoning shame of asking experts or potential investors for their opinion on one's idea may be a human flaw. However, for the entrepreneurial manager, it is inappropriate to practice such behaviour as the unfinished product or service embeds the potential for realization of untapped ideas.

Future outlook

In conclusion, the frameworks presented provide a helpful guideline for the core elements of a startup and the problem it is trying to solve. The validity and appropriateness for a venture's particular product/service are not set in stone. Furthermore, the hype that some introduced strategies enjoy is not entirely reasonable as the methods imply weaknesses in their overall construction. However, the methods serve as a starting point, but entrepreneurial flexibility and the ability to adapt methods should be considered. Thus, it is to be expected that established core principles are increasingly merged but simultaneously added novel and fashionable dimensions in the future to approach a company's founding and market entry with untapped angles. Here, both – DT (Lewrick, Link, & Leifer, 2018) and LS (Ries, 2012) – find their fit to supply business founders with insights for their future operations, yet with pitfalls to consider, simultaneously.

The outlook that digitized business models and ecosystems will prevail is therefore not only justified but necessary to consider, as these are likely to be indispensable terms of future's managerial vocabulary.

Overall it is assumable that an increasing number of models and frameworks will pay greater attention to the founders, risk management and resilience considering the need for digitization. The strategic orientation towards sustainable and crisis-resistant competitive advantages will be given a new depth by coming startups, hopefully contributing to reconstructing the weakened economy.

References

4investors (2020). *Warum so viele Startups scheitern!* Retrieved from https://www.4investors.de/nachrichten/boerse.php?sektion=stock&ID=145726. Access: 18.02.2021.

Alpar, A., Koczy, M., & Metzen, M. (2015). *SEO – Strategie, Taktik und Technik: Online-Marketing mittels effektiver Suchmaschinenoptimierung*. Wiesbaden: Springer Gabler.

Bain, & Company (2020). *Coronavirus Insights*. Retrieved from https://www.bain.com/insights/topics/coronavirus/. Access: 27.01.2021.

Bain, & Company (2021). *The Future of Luxury: Bouncing Back from Covid-19*. Retrieved from https://www.bain.com/insights/the-future-of-luxury-bouncing-back-from-covid-19/. Access: 12.02.2021.

Bell, E., Bryman, A., & Harley, B. (2018). *Business Research Methods*. Oxford: Oxford University Press.

Bennett, N., & Lemoine, J. G. (2014). What VUCA really means for you. *Harvard Business Review, 92*(1), 27–28.

Berg, B. L. (2006). *Qualitative Research Methods for the Social Sciences* (7th ed.). London: Pearson Education.

Bhargava, R. & Herman, W. (2020). *The Startup Playbook* (2nd ed.). New York: Lioncrest Publishing.

Blank, S. (2013). Why the Lean Start-Up Changes Everything. *Harvard Business Review, 91*(5), 63–72.

Bryman, A. (2012). *Social Research Methods* (5th edition). Oxford: Oxford University Press.

Business Insider (2015). *Frank Thelen erzählt die 6Wunderkinder-Geschichte*. Retrieved from https://www.businessinsider.de/gruenderszene/allgemein/frank-thelen-6wunderkinder-exit/. Access: 12.04.2021.

Carvalho, N., & Yordanova, Z. (2018). Why say no to innovation? Evidence from industrial SMEs in European Union. *Journal of Technology Management & Innovation, 13*(2), 43–56. DOI: 10.4067/S0718-27242018000200043.

Chesbrough, H. (2006). *Open Business Models: How to thrive in the new innovation landscape*. Boston: Harvard Business School Press.

Chesbrough, H., & Rosenbloom, R. S. (2002). The role of the business model in capturing value from innovation: evidence from Xerox Corporation's technology spin-off companies. *Industrial and Corporate Change, 11*(3), 529–555. DOI: 10.1093/icc/11.3.529.

Christensen, M. C. (2000). *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail*. Boston: Harvard Business Review Press.

Cohen, W. M. & Levinthal, D. A. (1990). Absorptive Capacity: A New Perspective on Learning and Innovation. *Administrative Science Quarterly*, *35*(1), 128–152. DOI: 10.1016/B978-0-7506-7223-8.50005-8.

Cooper, R. G. (2008). Perspective: The Stage-Gate Idea-to-Launch Process Update, What's New and NexGen Systems. *Journal of Product Innovation Management*, *25*(3), 213–232. DOI: 10.1111/j.1540-5885.2008.00296.x.

DeAndrea, D. C. (2015). Testing the Proclaimed Affordances of Online Support Groups in a Nationally Representative Sample of Adults Seeking Mental Health Assistance. *Journal of Health Communication, 20*(2), 147–156. DOI: 10.1080/10810730.2014.914606.

Deutscher, G. (2010). *Through the language glass: How words colour your world.* London: William Heinemann.

Di Cristini, A., Gaj, A., Labory, S., Leoni, R. (2003). Flat Hierarchical Structure, Bundles of New Work Practices And Firm Performance. *The Journal of the Italian Economic Association*, *8*(2), 313–328.

Durand, A. (2020). *Visualisierung – Macht der Gedanken: Wie Sie mit klugen Strategien aus der Psychologie Ihr verstecktes Potenzial entdecken, Ihr Mindset auf Erfolg programmieren und alle Ihre Ziele erreichen*. Independently published.

Düsing, K. (2016). *Das Problem der Subjektivität in Hegels Logik: Systematische und entwicklungsgeschichtliche Untersuchungen zum Prinzip des Idealismus und zur Dialektik*. Hamburg: Meiner Verlag.

Drucker, P. F. (2006). *Innovation and Entrepreneurship*. London: Harper Business.

Erbeldinger, J., & Ramge, T. (2013). *Durch die Decke denken: Design Thinking in der Praxis*. Munich: Redline.

Festinger, L. (1957). *A Theory of Cognitive Dissonance*. Beverly Hills: Stanford University Press.

Flick, U. (2011). *Qualitative Sozialforschung: Eine Einführung* (9th ed.). Berlin: Rowohlt Verlag.

Fox, C. R., & Levav, J. (2001). Familiarity Bias and Belief Reversal in Relative Likelihood Judgment. *Organizational Behavior and Human Decision Processes*, *82*(2), 268–292. DOI: 10.1006/obhd.2000.2898.

Frederick, H., O' Connor, A., & Kuratko, D. F. (2006). *Entrepreneurship* (4th ed.). Melbourne: Cengage Learning Australia Pty Limited.

Grashiller, M., Luedeke, T. F., & Vielhaber, M. (2017). Integrated approach to the agile development with design thinking in an industrial environment. *Conference: ICED17: 21st International Conference on Engineering Design*, *2*(1), 239–248.

Gray, D. E. (2004). *Doing Research in The Real World*. London: Sage Publications.

Greve, G. (2010). Erster Teil: Theoretische Erkenntnisse. In G. Greve, E. Benning-Rohnke (Eds.). Kundenorientierte Unternehmensführung: Konzept und Anwendung des Net Promoter® Score in der Praxis (pp. 1–32). Wiesbaden: Gabler Verlag.

Grove, A. (2009). *Market Rebels: How Activists Make or Break Radical Innovation*. Princeton: Princeton University Press.

Habermann, F. (2008). *Der homo oeconomicus und das Andere: Hegemonie, Identität und Emanzipation*. Baden-Baden: Nomos.

Herstatt, C., & von Hippel, E. (1992). From Experience: Developing New Product Concepts Via the Lead User Method: A Case Study in a 'Low Tech' Field. *Journal of Product Innovation Management*, *9*(1), 213–221. DOI: 10.1016/0737-6782(92)90031-7.

Herzberger, T., & Jenny, S. (2017). *Growth Hacking: Mehr Wachstum, mehr Kunden, mehr Erfolg. Der Praxisratgeber für Durchstarter im Online-Marketing!* Bonn: Rheinwerk.

Hofstede, G. H. (1980). *Culture's consequences: International differences in work-related values*. Beverly Hills: Sage Publications.

Isaacson, W. (2014). *Where Innovation Comes From; Today's biggest innovations are coming from the combination of human inspiration and computer-processing power.* New York: Wall Street Journal (Online).

Jussim, L. (2012). *Social Perception and Social Reality: Why Accuracy Dominates Bias and Self-Fulfilling Prophecy.* Oxford: Oxford University Press.

Kalhammer, B. (2019). *Start-Up Hacks*. Munich: Redline.

Kaplan, R. B. (1966). Cultural Thought Patterns in inter-cultural education. *Language Learning*, *16*(1), 1–20. DOI: 10.1111/j.1467-1770.1966.tb00804.x.

Kaplan, R. S., & Norton, D. P. (1992). The Balanced Scorecard – Measures that Drive Performance. *Harvard Business Review, 70*(1), 71–79.

Kaschek, B. (2014). *True Value Selling. So verankern Sie Ihr Angebot direkt in der Wertschöpfungskette Ihrer Kunden*. Wiesbaden: Springer Gabler.

Kelley, D. (2016). From Design to Design Thinking at Stanford and IDEO. *The Journal of Design, Economics, and Innovation*, *2*(1), 88–100. DOI: 10.1016/j.sheji.2016.01.009.

Kim, C. W., & Mauborgne, R. A. (2015). *Blue Ocean Strategy: How to Create Uncontested Market Space and Make the Competition Irrelevant*. Boston: Harvard Business Review Press.

Klein, L. (2013). *Ux for Lean Startups: Faster, Smarter User Experience Research and Design*. Cologne: O'Reilly.

Kubr, T, Ilar, D., & Marchesi, H. (2016). *Planen, gründen, wachsen. Mit dem professionellen Businessplan zum Erfolg* (8th ed.). Munich: Redline.

Kuckartz, U., Dresing, T., Rädiker, S., & Stefer, C. (2007). *Qualitative Evaluation*. Wiesbaden: VS Verlag für Sozialwissenschaften.

Lewrick, M., Link, P., & Leifer, L. (2018). *The Design Thinking Playbook*. Munich: Wiley.

Lin, S. (2014). *Secret to Startup Failure.* New York: New EntrepreNo's.

Lubin, A. D., & Esty, D. C. (2010). *The Sustainability Imperative*. Watertown: Harvard Business Review Press.

Maslow, A. H. (1943). A theory of human motivation. *Psychological Review, 50*(4), 370–396.

Maurya, A. (2016). *Scaling Lean: Mastering the Key Metrics for Startup Growth*. New York: Portfolio/Penguin.

Mayring, P. (2002). *Einführung in die qualitative Sozialforschung – eine Anleitung zum qualitativen Denken*. Weinheim: Beltz Verlag.

McKinsey, & Company (2020a). Innovation in a crisis. why it is more critical than ever. Retrieved from https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/innovation-in-a-crisis-why-it-is-more-critical-than-ever. Access: 27.01.2021.

McKinsey, & Company (2020b). Reimagining consumer-goods innovation for the next normal. Retrieved from https://www.mckinsey.com/industries/consumer-packaged-goods/our-insights/reimagining-consumer-goods-innovation-for-the-next-normal. Access: 27.01.2021.

McKinsey, & Company (2020d). Ecosystem 2.0: Climbing to the next level. Retrieved from https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/ecosystem-2-point-0-climbing-to-the-next-level. Access: 09.02.2021.

McKinsey, & Company (2020c). How do companies create value from digital ecosystems? Retrieved from https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/how-do-companies-create-value-from-digital-ecosystems. Access: 09.02.2021.

Medinilla, Á. (2014). *Agile Kaizen. Managing Continuous Improvement Far Beyond Retrospectives.* Heidelberg: Springer.

Mintzberg, H., & Waters, J. A. (1985). *Of strategies, deliberate and emergent. Strategic Management Journal*, *6*(3), 257–272. DOI: 10.1002/smj.4250060306.

Müller, H. E. (2018). Agil, Plattform, Startup – jenseits des Hypes. *Working Paper Forschungsförderung*, *109*(1), 4–58.

Myers, M. D., & Newman, M. (2007). The qualitative interview in IS research: Examining the craft. *Information and Organization*, *17*(1), 2–26. DOI: 10.1016/j.infoandorg.2006.11.001.

Myers, I. B. (1962). *The Myers-Briggs Type Indicator: Manual*. Palo Alto: Consulting Psychologists Press.

Nickerson, R. S. (1998). Confirmation Bias: A Ubiquitous Phenomenon in Many Guises. *Sage Journals*, *2*(2), 175–220. DOI: 10.1037/1089-2680.2.2.175.

Nidagundi, P., & Novickis, L. (2016). Introduction to Lean Canvas Transformation Models and Metrics in Software Testing. *Applied Computer Systems*, *19*(1), 30–36.

Nietzsche, F. (1888). *Twilight of the Idols or how to Philosophize with a Hammer*. Leipzig: C. G. Naumann.

Osterwalder, A., & Pigneur, Y. (2011). *Business Model Generation*. Frankfurt on the Main: Campus.

Osterwalder, A., Pigneur, Y., Bernarda, G., Smith, A., designed by Papadakos, T. (2014). *Value Proposition Design: How to Create Products and Services Customers Want.* Wiley.

Pearce, C. L. (2003). *Shared Leadership: Reframing the Hows and Whys of Leadership*. New York: Sage Publications.

Pilcher, N., & Richards, K. (2013). Contextualising higher education assessment task words with an 'anti-glossary' approach. *International Journal of Qualitative Studies in Education*, *2*(1), 1–22.

Pott, O., & Pott, A. (2012). *Entrepreneurship: Unternehmensgründung, unternehmerisches Handeln und rechtliche Aspekte*. Berlin: Springer Gabler.

Pressfield, S. (2012). *The War of Art: Break Through the Blocks and Win Your Inner Creative Battles*. Dublin: Black Irish Entertainment LLC.

Rauch, J. (2013). *Observational Calculi and Association Rules*. Wiesbaden: Springer.

Ries, E. (2012). *Lean Startup: Schnell, risikolos und erfolgreich Unternehmen gründen*. Munich: Redline.

Robson, C. (1993). *Real World Research*. Oxford: Blackwell.

Rumelt, R. (2011). *Good Strategy Bad Strategy: The difference and why it matters* (4th ed.). London: Profile Books.

Saunders, M., Lewis, P., & Thornhill, A. (1996). *Research Methods for Business Students* (8th edition). Harlow: Pearson.

Schmidt, F., & Hunter, J. (1977). *Development of a general solution to the problem of validity generalization*. *Journal of Applied Psychology*, *62*(1), 529–540.

Seelig, T. (2015). *Creativity Rules: Get Ideas Out of Your Head and Into the World*. New York: Harper One.

Seitz, T. (2017). *Design Thinking und der Geist des Kapitalismus: Soziologische Betrachtungen einer Innovationskultur.* Bielefeld: Transcript.

Siegfried, P. (2021). *Handel 4.0: Die Digitalisierung des Handels – Strategien und Konzepte Band 1*. Norderstedt: BoD.

Siegfried, P. (2017). *Strategische Unternehmensplanung in jungen KMU: Problemfelder und Lösungsansätze*. Berlin: De Gruyter.

Siegfried, P. (2015b). *Die Unternehmenserfolgsfaktoren und deren kausale Zusammenhänge, Zeitschrift Ideen – und Innovationsmanagement*. Deutsches Institut für Betriebswirtschaft GmbH/Erich Schmidt Verlag. DOI: 10.37307/j.2198-3151.2015.04.04.

Siegfried, P. (2015a). *Trendentwicklung und strategische Ausrichtung von KMUs*. Siegburg: EUL-Verlag.

Siegfried, P. (2014). *Knowledge Transfer in Service Research – Service Engineering in Startup Companies*. Siegburg: EUL-Verlag.

Siegfried, P. (2013b). *Development of a service engineering concept for SMEs, Performance Measurement and Management*. Wroclaw: Publishing House of Wroclaw University of Economics.

Siegfried, P. (2013a). *Studies analyse on strategic corporate planning in SMEs*. Entrepreneurship-conference University of Lisboa/PRT.

Siegfried, P. (2012). *Strategic Business Planning in Young Small and Medium Enterprises, Performance Measurement/Management*. Wroclaw: Publishing House of Wroclaw University of Economics.

Sinek, S. (2009). *Start with Why.* New York: Penguin LCC US.

Stähler, P. (2019). *Das Richtige Gründen. Werkzeugkasten für Unternehmer.* Hamburg: Murmann.

StartUpWissen (2020). *Warum scheitern StartUps? Die 20 häufigsten Gründe*. Retrieved from https://startupwissen.biz/daran-scheitern-die-meisten-startups/. Access: 18.02.2021.

Smith, R. D. (2013). *Strategic Planning for Public Relations* (4th ed.). New York: Routledge.

t3n (2016). *Warum Startups scheitern: Das sind die 20 häufigsten Gründe*. Retrieved from https://t3n.de/news/startups-scheitern-20-569194/. Access: 27.01.2021.

Tidd, J., & Bessant, J. (2013). *Strategic Innovation Management*. Chichester: Wiley.

Verganti, R. (2011). Radical Design and Technology Epiphanies: A new Focus for Research on Design Management. *Journal of Product Innovation Management*, *28*(1), 384–388. DOI: 10.1111/j.1540-5885.2011.00807.x.

Von Engelhardt, S., & Petzolt, S. (2019). *Das Geschäftsmodell Toolbook für Digitale Ökosysteme.* Frankfurt on the Rhine: Campus.

Von Engelhardt, S., & Wangler, L. (2019). Erfolgsfaktoren in digitalen Plattformmärkten. In Von Engelhardt, S., & Petzolt, S. (Eds.). *Das Geschäftsmodell Toolbook für Digitale Ökosysteme* (pp. 12–24). Campus: Frankfurt on the Rhine.

Weinberg, U. (2019). Design Thinking: Vom Innovationsmotor zum Kulturtransformator. In Von Engelhardt, S., & Petzolt, S. (Eds.). *Das Geschäftsmodell Toolbook für Digitale Ökosysteme* (pp. 36–51). Frankfurt on the Rhine: Campus.

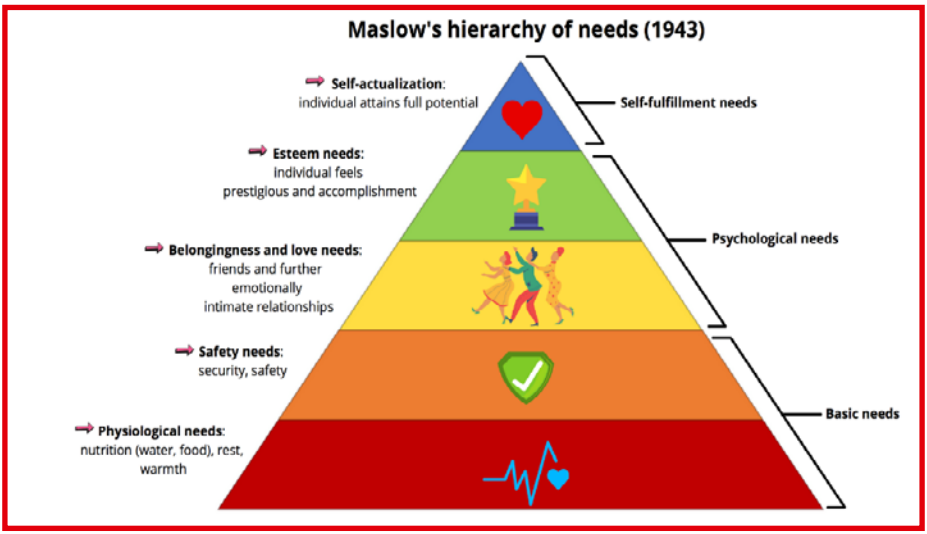
Wheelwright, S. C., & Clark, K. B. (1992). *Revolutionizing product development: quantum leaps in speed, efficiency, and quality*. New York: Simon and Schuster.

Whorf, B. (1956). The relation of habitual thought and behaviour to Language. In J. B. Carroll (Ed.). *Language, thought and reality: selected writings of Benjamin Lee Whorf* (pp. 134–159). Cambridge: Cambridge University Press. DOI: 10.1007/978-1-349-25582-5_35.

Williams, D. (2014). *Connected Crm: Implementing a Data-Driven, Customer-Centric Business Strategy*. Hoboken: Wiley.

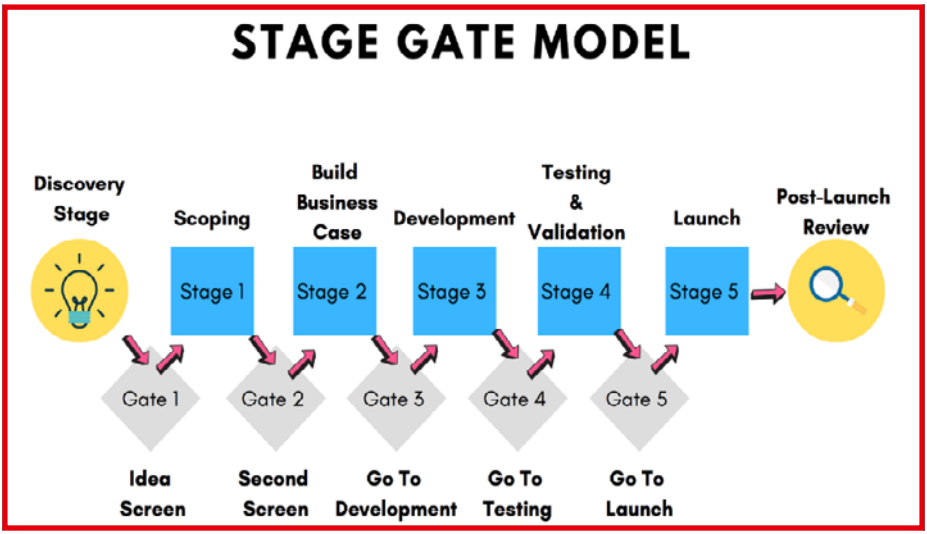
Appendix

Appendix 1. Hierarchy of needs



Source: Adapted from Maslow, 1943.

Appendix 2. Stage-Gate Model



Source: Adapted from Cooper, 2008.