MASTERING YOUR ENTREPRENEURIAL JOURNEY

FROM VISION TO VENTURE

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Preface: Mastering Your Entrepreneurial Journey—from Vision to Venture

When was the last time you dared to do something unconventional? To dare something others might label a crazy idea, too risky, or impossible? Every month, we, the authors, gather to pose some provocative questions—the kind that linger in your thoughts for weeks. Questions like, 'Do you think what you do has an impact, and how could you double the impact without doubling your efforts?' We exchange thoughts and inspirations, seek feedback on new (and sometimes old) ideas, and confront ourselves and others with inconvenient truths. One such truth we recently discussed is that too many people shy away from doing things that might fail. Avoiding mistakes has become a norm for many, younger and older people alike. And we believe this is problematic. So, we asked ourselves what can we do to change this mindset?

Let us start in our childhood; not only ours, but also yours—and everybody else's, for that matter: as children we learn to walk by falling (and failing) repeatedly. This process is similar for all children, regardless of ethnicity, social origin, or gender. It mirrors the lean start-up process popularized by Eric Ries. Start-ups build, measure, and learn by testing early product versions. Children take a few steps, fall, and stand up again. They do this over and over again until they begin to walk. They go through countless iterations of this 'build-measure-learn' behavior—take a few steps, fail, and stand up again. Then, they apply the process to other activities as well—riding a bicycle, practicing a new sport, building a tree house.

However, this effective learning method changes abruptly when children enter a classroom. From primary school onward, achievement is measured by the degree to which mistakes are avoided. Schools often emphasize the past and methodologies that teach logical thinking and structure. Don't get us wrong; learning from past experiences and mastering logical thinking and mathematics are crucial. However, a sharper focus on how to tackle future challenges is desirable.

If avoiding mistakes is the primary measure of achievement, how can we encourage others to work on creative solutions outside the box? If moving inside the box without touching the frames results in good grades, why should one even explore the edges? Isn't there a contradiction in the learning by doing we undergo as a child to equip ourselves with fundamental abilities like walking, and building and the 'learning by avoiding' we face later on?

This is where entrepreneurial education comes in. When we talk about entrepreneurial education, we do not mean training everyone to become a businessperson. Instead, it's about fostering and supporting an entrepreneurial mindset. This refers to solution-oriented thinking and identifying problems early rather than avoiding challenges or delaying them. We see such a mindset as fundamental for navigating life and addressing personal and societal challenges. Problems could be seen as opportunities to grow, shine, and achieve. This mindset encourages the acceptance of challenges and promotes change and is valuable in many situations in life. Entrepreneurship, the manifestation of this mindset, is fundamentally about problem-solving. This automatically begs the question: Are we all entrepreneurs? Our response is: In a sense, yes, we are. We are entrepreneurs of our own lives, and therefore, we find it helpful to master the thinking and tools that entrepreneurs use.

Will people who are exposed to entrepreneurial education become founders of commercial companies? Not necessarily. We will still have scientists, medics, florists, construction workers, academics, and many others. But even when you do not become an entrepreneur you could still see problems as opportunities for change. You might change yourself, your thinking, your attitudes, and your behavior or you might change systems on a societal, economic, or technological level. Or you might change anything in between. Of course, this shift in perspective would naturally lead to more entrepreneurs in the form of founders, politicians, and change agents. We think, given the enormous challenges ahead of us, we need these entrepreneurial individuals more than ever.

We wrote this book to inspire you to try things you have never done before, and to dare to do so even in the face of potential failure. This book is for those who challenge the status quo, who want to make changes and who seek to leave a positive dent in this world.

We congratulate you on your decision to take matters into your own hands. Make something of it. We support your journey with insights, tools, and instructions on how to get started.

Having said this, we invite you to embark on a journey of innovation, creativity, and courage. Let this book be your guide as you explore new ideas, challenge conventional wisdom, and strive to make a meaningful impact. We look forward to seeing what you will achieve. Feel free to share your inspirations, further ideas, or inconvenient truths with us (igh@uni-hohenheim.de). Until then, embrace the mastery of your entrepreneurial journey, from vision to venture.

The authors

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About the Authors

Andreas Kuckertz is a Professor of Entrepreneurship at the University of Hohenheim. Andreas Kuckertz focuses on research and teaching and has never understood why we educate young people at schools and universities to become a cog in the machine and then expect them to magically transform into changemakers and entrepreneurial thinkers who will drive the economy and society forward. His work is dedicated to solving this dilemma, and though he fails often, he continuously fails at a higher level.

Thomas Leicht is a research associate at the University of Hohenheim. As a start-up growth aficionado, he conducts hands-on research on how to create great products and scale new ventures.F ascinated by science and engineering, Thomas Leicht believes that too many brilliant inventions fail to achieve widespread application. To address this predicament, his work focuses on helping entrepreneurs translate technological inventions into scalable products and companies.

Indra da Silva Wagner is an innovation management researcher at the University of Hohenheim, specializing in firms' sustainability efforts. She believes that addressing the depletion of natural resources and overconsumption requires innovation in economic activities. Entrepreneurial vision and action are crucial to promoting sustainable consumption and production patterns.

Maximilian Scheu is an entrepreneurship researcher and facilitator at the University of Hohenheim with significant experience in guiding nascent entrepreneurs through the validation process. He believes that most people conform to an established social routine they never question, making them complain about living a boring life. Living a life that is externally controlled prevents them from recognizing and developing their full potential. Entrepreneurship is a tool to find and do what you are really good at.

Bernd Ebersberger is a Professor of Innovation Management at the University of Hohenheim. Given the grand challenges ahead, Bernd Ebersberger thinks, writes, and speaks about how innovation and entrepreneurship can contribute to a better tomorrow.

Introduction to Mastering Your Entrepreneurial Journey

Welcome to your start-up journey! Entrepreneurship comes with the great promise of living a self-determined and fulfilling working life. Yet it comes with some serious challenges as well. Let's be honest: Who has significant experience building a start-up? Only a very few do. So if you're wondering whether entrepreneurship is for you and how exactly it should all work, then this book is for you. People who take responsibility for themselves and others; who independently discover problems worth solving and then develop a viable solution for them; and who build organizations and scale them are a societal resource that is more than scarce. Welcome to a club with extraordinary members!

As a multigenerational team of academics, we have seen countless start-ups and accompanied many spin-offs from the university that have commercialized promising research results. We have seen some fail, and we have seen some succeed—in any case, we have seen all of them learn, and we have learned quite a bit during that time as well. Our combined experience and deep knowledge of the academic literature on entrepreneurship are what we want to share with you in this book, with the goal of helping you succeed.

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This book is about building skills for entrepreneurship. Entrepreneurial skills help solve various tasks and, thus, benefit both entrepreneurial endeavors and professional work in other contexts. Many corporations seek people with a proactive mindset who bring in their problem-solving skills in an autonomous working style to develop processes and products that are more customer centered. So even if you do not aim to adopt an entrepreneurial mindset to pursue a start-up opportunity, you will still have to master complex tasks in other contexts. Therefore, learning methods and tools tailored to problem-solving is not a bad idea. Expect to benefit from this book even if you decide against starting up. But of course, entrepreneurship is always preferable to being an employee (ok, we didn't mean that very seriously).

When we decided to write this book, we felt that we had to close an essential gap in the literature. You will find many books out there written by, for instance, successful entrepreneurs or venture capitalists, and there are some great war stories to discover. Yes, there is a lot you can learn from this stream of the literature. Still, of course, you can always ask where the evidence is that supports the claims, canvases, or concepts presented there. When you then turn to the academic literature, where all the actual evidence is published, you will find that it is hard to access and not really easy to grasp, especially after a long working day. This is where we want to help: Our statements and recommendations have their origins in the academic, peer-reviewed literature, but we present them as we would in a one-to-one conversation—accessible and perhaps with a wink.

This book is for you when you are looking for some solid information on entrepreneurship, whether you are an aspiring founder, student, researcher, scientist, experienced professional, or just anyone interested in taking control of their own professional future. We will take you from the very beginning of your entrepreneurial journey to the later phases where your start-up hopefully grows, all along equipping you with the heuristics, tools, and frameworks that help address the main challenges you will be facing.

Like all skills, entrepreneurial skills depend on doing. However, those with a solid information base master novel and uncertain tasks more effectively than those without entrepreneurial education (Rauch & Hulsink, 2015). To achieve this, the chapters in this book equip you with proven methods and tools that will systematically guide you through the entrepreneurial process, thus increasing your likelihood of success in mastering complex tasks. Read the book sequentially, or skip right away to the chapter that addresses your current challenge. Both approaches will work on your journey to becoming a (better) entrepreneur. You will find each chapter ending with 'three things to do right now.' Only doing builds real skills, so go for it. You'll be surprised where some of these three things will take you. Just as you will be surprised by the many things you will discover on your entrepreneurial journey. Have fun with it!

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Demystifying Entrepreneurship: What It Is and What It Is Not

In this chapter, you will learn …

… what entrepreneurship is all about,
… who an entrepreneur is and how you fit into that scheme, and
… how you can start your venture ideation process.

What Entrepreneurship Is Not—At Least Not Necessarily

Congratulations! This book you are holding will guide you toward your entrepreneurial dream! Unlike coordinating the right product and placing it in the right place, promoting it, and selling it for the right price, you will engage in all of these activities one step earlier (some entrepreneurial agents might pat you on the back as you are a step ahead of the marketing agents). As an entrepreneur, you will find the right team members, develop the right product, and start the right company—then, you can call your marketing buddies to fancy their magic mix. However, before you begin with all of this, it is essential to know what entrepreneurship is—and what it is not. Entrepreneurship is a colorful

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phenomenon. Before we immerse in what it is, let's rule out what it is not. Here, it is important to be especially aware of outliers and wrong public portrayals. Media and society tend to picture a heavily distorted image of entrepreneurs (Prochotta et al., 2022). Mass media addresses the masses by reporting what most people want to read and hear about. Thus, media coverage of entrepreneurs is likely analogous to sports players, actors, or politicians. The public account is frequently biased toward the select few (Kuckertz et al., 2023), neglecting how diverse and unique we are.

How often do you read about the champions within a domain? And how often do you read about the average Joe within the exact same domain? Reports about entrepreneurs frequently feature success stories, scandals, and exquisite lifestyles instead of the multitude of aspects about entrepreneurship and entrepreneurial agents. Such a public portrayal bears the risk of misconceptions (Anderson & Warren, 2011). Do not confuse outliers with the norm. Here is a typical example of a conversation we often have with aspiring entrepreneurs:

We: "What drives you to become an entrepreneur?"

Them: "Entrepreneurship helps us to become rich, fast."

We: "How come you think so?"

Them: "The wealthiest people in the world are mostly entrepreneurs."

Indeed, most members featured in Forbes magazine's list of the wealthiest people (Forbes, 2023) are entrepreneurs or entrepreneurs' heirs. However, one cannot conclude from a population's outliers to the traits of the whole population, especially not if the results are survivorship biased; that is, they mainly only include the start-ups and entrepreneurs who made it big, neglecting those who did not succeed to the same degree. Do not confuse outliers with the norm. Entrepreneurship remains uncertain. You work on something today that might happen in the (near or far) future. There is no guarantee for success, especially no fast track and blueprint to wealth creation through entrepreneurship.

Understanding Entrepreneurship—More Than Just Starting a Company

Different stakeholders frequently confront us with (often too simplistic) perceptions of entrepreneurs, entrepreneurship, and their role in society and the economy. One common stereotype reduces entrepreneurship to founding a company, preferably a high-tech company. This perspective falls short, portrays only a few facets of the complete phenomenon, and fails to do justice to the broader framework conditions of entrepreneurship (Stevenson, 1983). Putting the few above the many (Kuratko & Audretsch, 2021) risks failure to understand and develop a proper entrepreneurial mindset.

You may not like the definition section of books and want to skip to the part where you start doing the exciting things. However, to understand and capture what entrepreneurship entails and who you will become as an aspiring entrepreneur, the following definitions will sharpen your entrepreneurial understanding and prepare you to become a conscious change agent. Howard H. Stevenson, a professor at Harvard Business School, understands entrepreneurship as "the pursuit of opportunity without regard to resources currently controlled" (1983, p. 3). In addition, entrepreneurship is a behavior rather than a job you do. You are an entrepreneur when you become "someone who perceives an opportunity and create[...] an organization to pursue it" (Bygrave & Hofer 1992, p. 14).

Both definitions include an essential aspect characterizing entrepreneurs and their activities. None of the understandings includes registering a company. Creating an organization implies that an entrepreneur coordinates the necessary resources to pursue the opportunity. Hence, you may have already become an entrepreneur in prior activities and are unaware of it. Table 1 exemplifies several forms of entrepreneurship.

In our understanding, entrepreneurship is more than starting a company, which then makes entrepreneurs more than the founders of new ventures. Entrepreneurship is fundamentally about taking actions under uncertainty, that is, daring to accept responsibility (Kuckertz, 2021). You do not need to frantically seek opportunities to become an entrepreneur.

Table 1 Four fictional examples of entrepreneurs. Table compiled by the authors

Mark Ramirez & Dustin Rainman, ServiTech—Technology company
• Mark Ramirez studied information technology and took business classes to bridge his free time on campus. Unintentionally, Mark developed a new web service that facilitates customer complaints for small- and medium-sized enterprises. When he showed his application to his friend Dustin from business school, he soon recognized the potential of this product,
• Before graduating from their studies, Dustin convinced Mark to develop the service further by testing it at his uncle's company. Their prototype worked, increasing customer satisfaction in after-sales services noticeably. Both decided to give this opportunity a shot. Instead of entering the job market, they engaged full-time in what they call ServiTech.
• One year later, they raised three million dollars in venture capital, grew their team to 20 employees, and declined a buy-out offer from a stock-listed corporation.
Patricia Oak, Wine store—Retail company
• Patricia Oak had always been passionate about wine and the craftsmanship of growing grapes. After working several years in a corporate banking job that did not fulfill her, Patricia decided to take the leap and pursue her passion for owning a wine store.
• Patricia used her savings to rent a retail space in the busiest area of her city. For months, she planned the store interior, ensuring it included unique features she collected from her favorite wine stores worldwide. Patricia sourced wines from the most prestigious and hidden wineries she had visited to cover a wide range of flavors and grapes.
• Leveraging social media for marketing, setting up an online shop, and hiring two employees to support operations, Patricia is an entrepreneur who makes six-digit annual revenues from sales.
Frank Butter, CamPa—Student initiative to organize campus parties
• Frank loves parties more than lectures. Unfortunately, there are barely any parties on campus; if so, they are poorly organized. Instead of going to bars to spend a fortune on drinks or to nightclubs far away, there must be some convenient, affordable, and superb solution nearby.
• In 2018, during his sophomore year, Frank turned his passion into a side business. Frank knows some bartenders from downtown, shares a room with a DJ, and is well-connected through the sports he plays. Including them all in his activities, he founded "CamPa," an event-planning student initiative specializing in organizing and hosting epic student parties.
• Frank and his friends do not care about making a fortune themselves, nor focusing on their income statements and how to save taxes. The goal was to create a safe and enjoyable environment for students to socialize, have fun, and make lasting memories without spending a fortune.

(*continued*)

Table 1 (continued)

Mahmut Khan—Informal street vendor • Mahmut was born and raised in a developing country. He found himself in a challenging financial situation and could not enjoy a thorough education. With a family to support and limited job options, he leveraged his wife's craftsmanship skills in weaving baskets with his entrepreneurial spirit. • Mahmut ventures out of necessity, running an informal business. He buys the materials, puts in labor and skills together with his wife, and sells the products at local markets.

Still, you need to be aware of your surroundings. Entrepreneurs are conscientious change agents. They perceive opportunities because they are aware that these could be anywhere. Famous inventor and entrepreneur Thomas Edison is often credited with the statement that most people would miss opportunities because such opportunities would be dressed in overalls, looking like work. The entrepreneur looks more closely when others squint sheepishly to the side or, in their rut, do not even notice what the entrepreneur recognizes. Hence, we consider an entrepreneurial mindset more of an approach to life than limiting it to business behavior.

Entrepreneurship—Meaning for Yourself

You may wonder what the starting point of your entrepreneurial journey is. People often tell us they want to be entrepreneurial but lack an idea. Sometimes, we even receive emails asking us for a business idea. "If I would have an idea, then …" Then what? Frankly, your entrepreneurial endeavor starts with you whenever you consider the right time (maybe right now?). Suppose you do not perceive an opportunity yourself. In that case, you likely will not have the persistence to pursue it when it gets uncomfortable.

Knowing the right time, how do you start? Aim for autonomy and self-determination if you apply an entrepreneurial mindset. Be proactive and take action. Do not let others decide about your future and control your life. Shape the life you consider worth living. In the first deductive exercise below, you can tell yourself what this life looks like and what obstacles hinder it.

Ideally, your idea helps solve a problem. If you are the problem owner, you have an invested interest in developing a solution to the problem. Even if nobody else would benefit from your solution, you will. The solution to the problem you engage with improves at least one life: yours. Hence, it is worth solving. Entrepreneurial phenomena reach from the individual to the whole economy and society (Davidsson & Wiklund, 2001). Therefore, you can expand this approach by looking at your surroundings and moving from a micro- to macro-level analysis.

Entrepreneurship—Meaning for the World

Entrepreneurship takes a broader role than starting a company. It appears in many forms, reaching from informal activities motivated by the necessity to create an income (Salvi et al., 2023) to innovative ventures that change the markets, habits, and people's behaviors, here in the Schumpeterian sense (Schumpeter, 1934) and, thus, contribute to economic growth and wealth creation. Entrepreneurship also includes the social and sustainable perspective of venturing (Stevens et al., 2015). Sometimes, we stumble across either–or opinions, with different stakeholders telling us one would either be a profit-oriented or a social business. Once, we even faced criticism for not offering courses that solely targeted social entrepreneurship. The root cause of such accusations is a misunderstanding of entrepreneurship.

In reality, there is rarely an explicit allocation to one or the other (Shepherd et al., 2019). Imagine any value creation on a continuum that ranges from pure nonprofit activity to purely profit-oriented economic activity. You can hardly do one without the other, or your value system moves you somewhat away from a pure profit orientation without considering your environment. Entrepreneurship drives economic growth, formalizes informal sectors, and reduces poverty (Ahmad & Hoffmann, 2008); it seeks sustainable ways to live and be economical while including a social component. As such, entrepreneurship becomes an essential driver of transforming current modes of economic actions toward more sustainable and responsible ways (Kuckertz, 2021). Entrepreneurship does the exact opposite of what some uninformed laypeople accuse it of: It drives change in various ways, including social and economic. Of course, what your entrepreneurial actions emphasize is up to you, the aspiring entrepreneurs out there.

Thus, entrepreneurial activity is on a broad continuum from nonprofit work to purely profit-oriented actions. Somewhere along this continuum are most established companies and start-ups, following a hybrid form that benefits society socially and economically (Shepherd et al., 2019). Hence, the adage "with great power comes great responsibility" does not only apply to Spider-Man. Likewise, it conveys that those with power must use it wisely. Entrepreneurs have the power to address problems that—if solved—can create an impact far beyond themselves (Markman et al., 2019).

You may wonder what kind of entrepreneurial activity you should pursue. Well, this is up to you to answer. From our experience, it makes sense to focus on a problem you have or that you perceive worth solving. We first introduce you to a heuristic on how to cluster your ideas. Figure 1

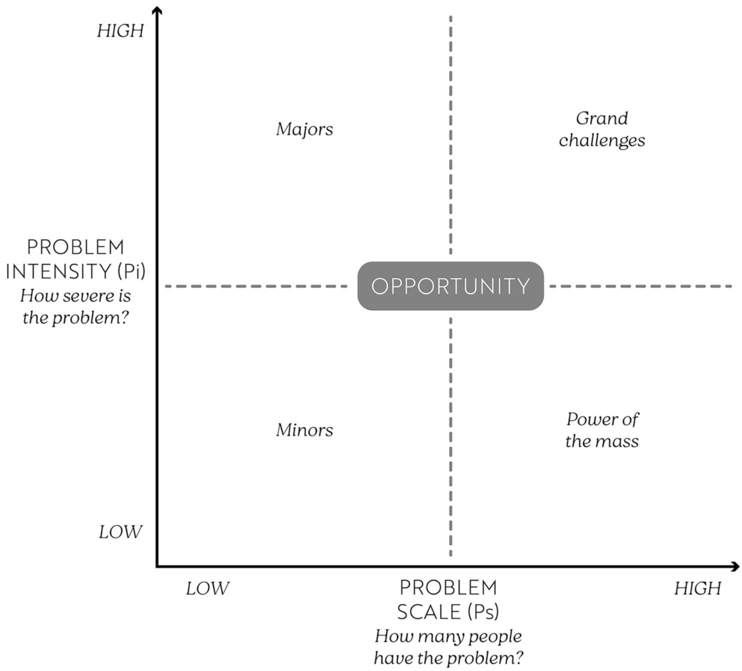

Fig. 1 The opportunity canvas: The more people have a huge problem, the larger the entrepreneurial opportunity. Authors' own figure

shows the opportunity canvas. We consider an opportunity to be dependent on the problem intensity (P_i) and the problem scale (P_s). The problem intensity tells you how severe the problem is for the problem owner. Just imagine how the problem owner's life would change if it were solved. The scale aspect addresses how many people have this problem. Is it just you? Or do others have similar issues, for example, students, travelers, or any larger population? Where do you spot opportunities? After finishing this chapter, take some minutes to think about problems—small or big—and who owns them. Are these minor problems or major problems? Can the power of the masses leverage them, or did you even spot grand challenges? Return to this canvas whenever you identify a problem worth solving. In the next chapter, you will learn how to identify problems systematically.

So why not take up a grand challenge? Academia defines grand challenges as "socio-environmental challenges that transcend firms, markets, and nations" (Markman et al., 2019, p. 371), including climate change, poverty reduction, inequality, and pollution (George et al., 2016). These include, for example, illnesses, insufficient access to clean water and sanitation, our polluted oceans, and climate change that force people to leave their homes because of unbearable life conditions or to fight the constraints to accessing education. We understand grand challenges as problems of a large size affecting many people. Unfortunately, newspapers are full of the grand challenges of our times. Luckily, you will also find a lot of entrepreneurial efforts contributing to solving these challenges.

Admittedly, taking a grand challenge may frighten aspiring entrepreneurs. There is no need to be afraid or feel obliged to the most enormous possible challenge out there. It makes sense for first-time founders to start with something more approachable or with small contributions to solving larger issues. Facebook founder and Meta CEO Mark Zuckerberg has been known to express that an essential business principle would be to tackle the more straightforward tasks initially because this approach could lead to significant advancements quickly. Particularly for nascent entrepreneurs without prior experience in actively pursuing an opportunity, it is plausible to address a problem they personally feel affected by. Nevertheless, keep an open mind and remember "that diverse, decentralised human effort can improve the world … [through] the development of solutions to grand challenges, in a financially, socially, and environmentally sustainable fashion" (Markman et al. 2019, p. 371). It is the sum of actions that counts.

Are You an Entrepreneur?

You may ask yourself if you have what it takes to become an entrepreneur. It is a reasonable question. You may even have heard that entrepreneurs would be born, not made. Really? Think about it. If this is true, you could test your DNA before continuing to read this book to see if you are the entrepreneurial type or not. Spoiler alert: The statement is a misconception far from the truth and another stereotype that entrepreneurship educators must work against. Think about different entrepreneurs you know in your environment or from the media. Are they all similar? Or are they, again, as diverse as humankind can be? Are Mark Zuckerberg and Evan Spiegel equal? Both are Caucasian technology entrepreneurs of about the same age competing for market share in the same industry. Yet they seem to differ in their public appearance and speaking. Are you not convinced yet? Think about Dr. Dre—the rapper, producer, and founder of the Beats by Dre brand. Does he equal Mark Zuckerberg or Evan Spiegel? What about Lea-Sophie Cramer, the German e-commerce entrepreneur? What about street vendors engaging in informal entrepreneurship? Entrepreneurs are heterogeneous; they dramatically differ from each other.

Indeed, some personality characteristics favor entrepreneurial endeavors, including openness, passion, self-efficacy, autonomy, and risk-taking propensity, to name a few (Baum et al., 2014). However, these apparent positive characteristics can also become detrimental in their extreme (Miller, 2015). The key to succeeding as an entrepreneur is to strive for a balance of skills and personalities. A great start is to know yourself—know your strengths and weaknesses. Then, you can look for complementary partners. Here is another example. Some people tend to be more introverted, and others have more extroverted personalities. An introvert founding a company does not match the stereotype of the entrepreneur who hops from stage to stage and acquires customers and partners by making cold calls supported by a charming personality. Yet the introvert may bring in strengths the extroverted person is missing. Teaming up mitigates each other's weaknesses and increases the skill set of the founding team. Being an entrepreneur, you coordinate the resources to pursue your opportunity. You design your team to enrich your resources and convince those who can do things better than you to join your entrepreneurial endeavor.

Three Things to Do Right Now

1. Treat yourself to coffee or tea (moderate caffeine intake enhances problem-solving skills; Zabelina & Silvia, 2020). Bring a pen and a notebook. What is important to you? What do you imagine your life looks like? What currently hinders you from living that life? Considering this, fill out the opportunity canvas. Identify problems you have, those people close to you, or society. How big are these problems? How many people have these? Limit your discovery to a rough estimation; there is no need to validate anything.
2. Write down how you define being an entrepreneur and what it means to you. How would an entrepreneur solve these problems? Read the next chapter to learn more about systematically addressing problems and developing solutions.
3. Test your enterprising potential by completing the GET2 Test for Enterprising Potential (www.get2test.net). Disclaimer: The results do not predict your entrepreneurial success, nor do they recommend you venture or let it go.

Further Down the Rabbit Hole

- Eisenmann, T. R. (2013). Entrepreneurship: A working definition. *Harvard Business Review*, *10*(5), 1–3.

In this short article, Tom Eisenmann explores the elasticity of the meaning of entrepreneurship. He elaborates on its meanings and shows how you can apply its principles not only to start a company but also to approach life.

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Navigating the Entrepreneurial Unknown: Benefiting from Unexpected Outcomes

In this chapter, you will learn …

… how not to fall in love with your first venture idea,
… to favor problems over ideas,
… how to benefit from understanding the "corridor principle," and
… how to protect yourself against uncertainty by embracing the principles of effectual logic.

Dismiss the Myth—There's No Such Thing As a Perfect "Start-Up Idea"

One of the questions we often hear when consulting with aspiring entrepreneurs is the following: "What do you think about my start-up idea?" The subtext is clear. The person asking is looking for approval, at least to some degree. Over the years, we have developed a somewhat humble attitude toward such requests. As understandable as the question is, it should not be answered, at least not in the sense of assessing whether an idea is a good or bad idea. One of us authors is still somewhat traumatized by waving the opportunity to invest in a venture that later became

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one of the fastest-growing German internet start-ups at the beginning of the millennium because the idea "would not scale." Such an experience teaches you something!

Initially, it is not about perfect ideas but rather about action toward the right problem. Far too many fledgling entrepreneurs paralyze themselves by searching and waiting for the ideal idea to emerge from the fog, which usually never happens—the results of start-up competitions, where hopeful entrepreneurs pitch, underscore this problem. Winning teams feel their idea was validated by the jury or the audience, whereas those placed second or even further behind start questioning themselves and their project.

A study following up on entrepreneurs pitching on ABC's Shark Tank illustrates how questionable expert or jury feedback can be. In this reality TV format, initially running on Japanese TV as Money Tigers and known in many other countries worldwide as Dragon's Den, hopeful entrepreneurs battle for investors' attention and subsequent investment. When researchers investigated the long-term success of participating start-ups (Smith & Viceisza, 2018), they found that the greater the number of offers by investors on the show, the less likely the start-ups were to survive in the long run. In other words, the more excited the experts were, the darker the start-up's future turned out to be. So if (so-called) experts are unlikely to help you validate your idea, what should you concentrate on instead? Especially at the beginning of your entrepreneurial journey, we suggest focusing on the problem rather than the solution.

Start with a Problem—and Fall in Love with a Problem

No one loves problems—except for entrepreneurs. Depending on our cultural background, we are sometimes taught to avoid the ugly word "problem" because it would make some people feel bad. Instead, we are told to speak of issues and challenges to make a harsh reality more digestible. For an entrepreneur, such a perspective feels slightly ridiculous. Entrepreneurs are problem-solvers, and problems are at the heart of entrepreneurship. Vinod Koshla, the co-founder of Sun Microsystems and a multibillion-dollar venture capitalist, puts it in the following way (eCorner, 2002, n.p.):

> "Any big problem is a big opportunity. If you think about it, no problem, no solution, no company. […] Nobody will pay you for solving a non-problem."

Therefore, it is not so much about whether you have a good idea for a start-up but rather whether you found a problem sufficiently relevant for enough people or organizations so that it is worth your creativity and effort to develop as many initial solutions to that problem as possible. The final validation will occur through the market—only the market can tell whether your idea was worth the effort.

Problems you spot might originate from a variety of sources. If you search for problems on any level, be open to change. Your start-up will be enabled by "nontrivial changes to the business environment—such as new technology, regulatory change, demographic and sociocultural trends, macroeconomic swings, and changes to the natural environment" (Davidsson et al., 2022, n.p.). Every change causes problems for those affected by it. If you can solve people's pain of change, you are one step closer to a valid business.

It helps if you own that problem. Look at it this way: Do you want to spend the following months and years of your entrepreneurial journey solving problems you care about, or do you just want to work with problems that pay the best to solve? There is nothing wrong with the second view, and the decision is totally up to you. But most hurdles will be easier to overcome if you genuinely believe the problem your start-up addresses desperately needs solving. Here is a great example: Anders VR is a start-up from southwest Germany specializing in creating virtual realities for older people, especially those living in nursing homes. Although this is obviously a massive market, when we talked to the entrepreneur early on in his career, we quickly learned how touched he was when someone from his family had to move into such a nursing home, and he discovered how dull and dreary life can be there. That's some motivation to make virtual reality work for nursing home residents!

Don't Wait—Start Moving

Assume you decided on a problem worth solving, maybe because you care about it or perhaps because you identified it as super relevant with the help of the opportunity canvas introduced in Chapter "Introduction to Mastering Your Entrepreneurial Journey." What should you do now? The best advice is that any action will be better than no action. In a now classic paper, Robert Ronstadt, then a professor at Babson College, introduced the so-called corridor principle (Ronstadt, 1988). His observation was that many entrepreneurs start one business after another, and those businesses appear to be related. Interestingly, the mere act of creating one business taught entrepreneurs so much about problems to solve that they started subsequent ventures solving better problems, consequently leading to more viable companies.

The corridor metaphor beautifully illustrates this fact. Imagine standing at the beginning of a long, dark corridor, maybe in an office building you visit for the first time. Suppose you keep standing at the start of the corridor. In this case, you can perhaps recognize a door to the left near you, but the perspective only lets you suspect what other doors come further down. And you simply do not know what comes behind the bend of the corridor because you cannot see it unless you move. Your only option is to start walking down that corridor to discover as many different doors as possible, learn where the corridor really leads, and finally unearth whether a golden door has been waiting for you (Fig. 1).

Action trumps nonaction, which applies not only to a sequence of ventures but also to what you learn in creating your first start-up. See the corridor as your problem space and the doors as potential ideas and solutions. Walking down the corridor allows you to experience possible serendipity, that is, "making surprising and valuable discoveries" (Busch, 2022, n.p.). The worst decision is not to move or learn anything new.

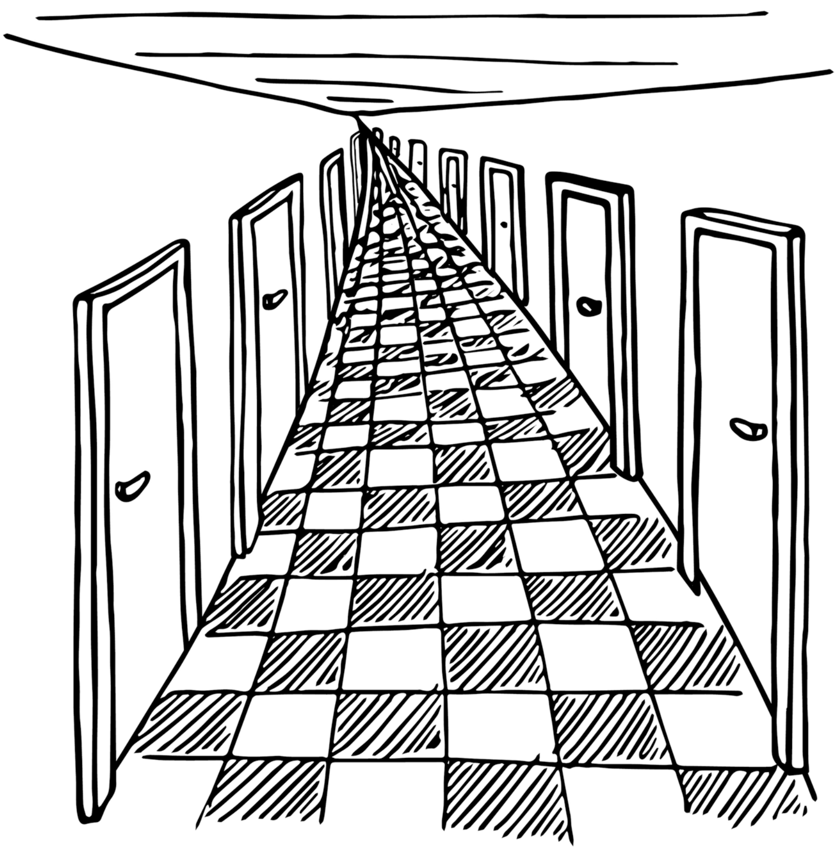

Fig. 1 The corridor principle. No one knows what treasures are ahead as long as you don't move. Authors' own figure

Safeguard Your Journey—Embrace the Principles of Effectual Logic

Will you need a plan when wandering along your metaphorical corridor? Professor Saras Sarasvathy from the University of Virginia's Darden School of Business would probably argue that you do not, and we tend to agree. When she discovered what she calls effectuation (or effectual logic)

(Sarasvathy, 2001), she confronted some of the most successful entrepreneurs, for instance, winners of Ernst & Young's Entrepreneur of the Year awards, with entrepreneurial decision problems. And she learned the following: These highly successful individuals think about entrepreneurial problems and opportunities in an entirely different way. Forget everything you might have learned in business school about management; it simply does not fit the challenges entrepreneurs face, especially in the early stages of an entrepreneurial project. And if you did not go to business school—pat yourself on the back because, in terms of entrepreneurship, this might have been the right decision.

Of course, we should always be a bit skeptical if we hear a story like that—it might well be the case that what made these super entrepreneurs successful is sheer luck and that research like the study carried out by Sarasvathy is seriously affected by what we call survivorship bias. Maybe hundreds of unsuccessful entrepreneurs out there were not part of this extraordinary sample Sarasvathy called expert entrepreneurs and who approached entrepreneurial activity in precisely the same way but did not strike it big? However, these expert entrepreneurs were not only one-time successes—on average, they established seven ventures each (Sarasvathy, 2022), which already gives us a hunch that they might have learned something valuable in their professional careers. For those of you who need more solid evidence and arguments, meta-analytical studies (such as that by Read et al., 2009) have clearly shown, here through statistically aggregating all the available evidence from various empirical studies, that the effectual logic expert entrepreneurs employ makes sense and is positively and statistically significantly associated with new venture performance.

So what is it that these top entrepreneurs do differently? Contrary to managers, they do not plan. Instead, they let concrete principles—consciously or subconsciously—guide them on their journey. Rather than following a definite blueprint that should help them reach a specific, predefined goal, they allow goals to emerge when wandering down the metaphorical corridor of their problem space. Consider adopting these principles; they are not only helpful when pursuing your start-up but also provide valuable life advice. Let's take a look at these principles (Sarasvathy, 2022):

- ***The bird-in-hand principle.*** As we write this book, artificial intelligence is the next big thing. And every other day, somebody approaches us with an idea of how artificial intelligence as a substantial enabling force could solve a pressing problem and how that would allow them to build a business. If only they had someone on the team with the competencies to handle the necessary programming! A consequence of this thinking is that people dream about a venture, but in the end, nothing happens. The bird-in-hand principle is a drastic cure to this dilemma. Some also call it the available means principle. It simply tells us to drop mythical, overambitious goals and to start with what is available. Who are you? What do you know? Whom do you know? And what kind of opportunities result from this? Start with an inventory of the resources and competencies under your control and put them to immediate use. In this way, you will stop dreaming and start working on exactly those problems where you can really contribute something with your venture.
- ***The affordable-loss principle.*** We often think of entrepreneurs as risk-taking individuals, but in reality, they operate under uncertainty. Technically speaking, risk is quantifiable, whereas first-time entrepreneurs in particular do not know at all what will happen to them and their projects. And even for experienced entrepreneurs, when they aim for an innovative solution, they also do not know how their project will evolve. This situation is best described as uncertainty and can be a considerable burden. Before embarking on a concrete venture, the affordable-loss principle tells you to precisely define how much time and how many resources you are willing to bet on it. When the time has passed and the resources have been spent, you terminate the venture if it is unsuccessful. Doing so has two positive effects. First, it makes uncertainty bearable because you know from the outset that, even if you are afraid of failure (and we all probably are to some degree), what the worst that can happen actually is. Second, this principle protects us from escalation of commitment. We have all been raised to show as much stamina and commitment as possible—but when is that too much? Defining and sticking to your affordable loss will help you stop digging if you find yourself in a hole.

- ***The crazy quilt principle.*** Surely, it is a good idea not to discuss your venture idea with anyone? After all, people might steal your world-changing idea? The start-up scene even has a pretty sweet expression for this: stealth mode. Entrepreneurs who operate in stealth mode virtually hide in the proverbial start-up garage and develop their products in absolute secrecy. The problem with such an approach is that you might well fall for developing solutions that virtually nobody out there is interested in. Hence, the proverbial recommendation in the start-up scene is to get out of the building. Talk to other people, whether they are potential customers, investors, or everybody who might contribute a valuable perspective to your problem and solution. Of course, you are not supposed to give away your business secrets. But if you are so secretive that—in the extreme case—you might not even be willing to talk to customers about your solution, why should they buy it? The crazy quilt principle is closely related to serendipity. Suppose you get out of the building and start talking to whomever is willing to listen. In that case, you will be astonished to learn who is able and motivated to contribute something to your venture, be it money, time, or maybe just an enlightening insight. If you adopt all of these contributions, the result is indeed something like a patchwork—a crazy quilt. The result will not look like something that results from straightforward planning, but it will be a viable solution. And this is what you have been looking for.
- ***The lemonade principle.*** With a causal planning perspective, everything happening on your entrepreneurial journey that is not part of the plan would be a deviation and, therefore, undesirable. The lemonade principle helps shift this perspective to something more productive. Everything unexpected might indeed be bad, but opportunity might also be hidden in the unexpected. When managers aim to weed out such events and try to avoid them at all costs, expert entrepreneurs would ask themselves how such a surprising event might be put to good use. Does it change your available means? Does it affect your goals? If you learn customers do not care about

your solution, what does this tell you about the real solutions they desire? The principle means you should dance in the rain rather than hide away from it.

- ***The pilot-in-the-plane principle.*** A vast industry provides insights and projections on what the future might look like. And their offers meet with enormous demand. At the same time, we know that the future cannot be predicted as much as we would like it to be. Futures studies talk with full intention about different potential futures in the plural and not about one future as such. And even if we assume for a moment that there are predictions available that help to control the future, it is very likely that you, as an entrepreneur establishing a new venture from scratch, are at a severe disadvantage when you compare yourself to the established players out there who can afford to buy such predictions or maybe even operate their own in-house departments for this purpose. The only reasonable option is to go where predictions do not make too much sense, for instance, when introducing innovative solutions in new markets. This is the realm where uncertainty is, and this is where effectual logic tells us to favor building the future over predicting it. Do not burden yourself with predictions; instead, focus on taking the next logical step toward a desirable future.

Let's sum up. Initially, you might have been searching for the perfect start-up idea, but in fact, it is more critical to prioritize addressing the right problem rather than waiting for the ideal solution. For true entrepreneurial success, passionately focus on identifying and addressing genuine problems that resonate with you. Especially in uncertain situations, just taking action will lead to unexpected opportunities and valuable insights, as illustrated by the corridor principle, where movement and exploration reveal more doors and paths than immobility ever could. Embrace effectual logic to manage the uncertainty of your entrepreneurial journey—do this by leveraging your available means, collaborating openly, adapting to unexpected events, and actively shaping the future rather than solely trying to predict it.

Three Things to Do Right Now

1. Entrepreneurs love problems! Work on your entrepreneurial mindset and keep a problem journal. Get a traditional notebook, use your smartphone, or whatever works best for you. Then, spend a week collecting everything that annoys you and others—the more problems you identify, the better. Be careful because we don't want this to be depressing. Each time you write down a problem, also write down what possible solutions you see. It doesn't matter if the solutions are reasonable or realistic or if you can implement them. You want to be open to problems and develop a problem-based, solution-oriented mindset.
2. Take one step down the corridor today. Talk to someone knowledgeable about your problem and potential solution, set up a landing page on the web to see whether people are interested, immerse yourself in your local start-up ecosystem, and visit a networking event for entrepreneurs. Whatever it is, favor action over inaction and let serendipity work for you.
3. Have you decided on a problem to solve with your venture? Great! The uncertainty ahead might feel intimidating, so let's do something about that and have the affordable-loss principle protect us. Decide now on the following: What will be the criteria that help you decide whether your project is a success or not? How much time are you willing to invest to reach this decision point? Three months? Six months? Even more? How many of your assets are you ready to devote to this project? This is the maximum of time and resources you can lose when embarking on your entrepreneurial journey should it be unsuccessful.

Further Down the Rabbit Hole

- Busch, C. (2022). *Connect the dots: The art and science of creating good luck*. Random House.

In this book, Christian Busch condenses his experience from many years of research on serendipity. It is a treasure chest with many solid exercises, creating a deep understanding of how serendipity emerges and what we can proactively do to enhance our probability of making surprising and valuable discoveries that help make our projects and ventures successful.

- Sarasvathy, S. (2022). *Effectuation. Elements of entrepreneurial expertise* (2nd ed.). Edward Elgar Publishing.

This book is the second edition of the foundational text on effectual logic. Saras Sarasvathy summarizes two decades of her research. Here, she illustrates how she built theory from researching expert entrepreneurs and shows—with numerous concrete case studies—how effectual logic can be put into action in real life.

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Targeting the Right Problem with Your Start-up: Uncovering Validation Techniques

In this chapter, you will learn …

… why validation is essential throughout your start-up's life cycle,
… how to generate validated learning that informs entrepreneurial decision-making, and
… how to use validation to explore problems.

Validate Your Assumptions to Learn How to Move Forward

People are bad at judging ideas. Start-up ideas are no exception. Even venerated venture capital professionals frequently bet on start-ups that do not return the invested capital or that end up failing (Gompers et al., 2020). Maybe worse, they also miss out on one in a million investment opportunities. Reid Hoffman (partner at Greylock Capital, co-founder of LinkedIn, and former COO of PayPal) often exemplifies this point with anecdotes about his decision not to invest in the start-up Stripe. Despite his experience as a seasoned entrepreneur and a background in Stripe's

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industry, he utterly misread what would become of the company, which skyrocketed to a staggering multibillion valuation within just a few years.

The pattern of misjudging start-up ideas can also be found outside Silicon Valley's fast-paced unicorn world. We invite you to get in touch with founders in your local community. Speak to them. Chances are, they also faced strong headwinds of skepticism dressed as "no," "this won't work," and "don't do that" (or less polite versions of it) while pitching their ideas to professionals. Does that render all feedback worthless? After all, a common mantra among entrepreneurs is to "just do it" and prioritize execution, right? Certainly not! As we have indicated in the previous chapters, focusing on execution is crucial to becoming a good entrepreneur, and we avidly foster it in aspiring founders. Good feedback, however, does not impede getting things done. Instead, it is the magical ingredient that renders execution in start-ups efficient and effective.

This is why practitioners and management scholars alike regard the lean start-up framework as the dominant logic of how start-ups should operate to turn their ideas into thriving businesses (Shepherd & Gruber, 2021). The cardinal idea of this framework is to test assumptions about a start-up's problem, solution, and business model by quickly iterating through experiments with customers to learn how to efficiently move forward. The framework is based on what we view as hard evidence supporting the usefulness of the incorporated heuristics (Frederiksen & Brem, 2017).

Testing assumptions can take different forms during a start-up's life cycle. Speaking with customers to better understand the problem or tracking sales metrics after the implementation of product changes are two common examples. At its core, though, testing assumptions boils down to starting with a hypothesis (not referring to hypotheses as a scientific term, but as a fancy word for how you assume the world to be), finding clever ways to generate information on that hypothesis (often feedback from customers), evaluating the information to determine whether your hypothesis is correct, and, thus, learning how to proceed. This is what we refer to as validation.

Validation relies on various forms of feedback. Going back to our question of whether feedback is worthless, the implications are clear: You do need feedback, but you also have to know when you need it, from whom to get it, how to ask for it smartly, and how to evaluate it. If you do, feedback will help you choose a problem that is actually worth solving and stay on course while developing a solution and business model around that problem.

A Validation Metaphor: Your Start-up Idea Is a Treasure Hunt

Before diving into practical advice, let us explain why validation matters by giving you a simple metaphor. Think of your entrepreneurial endeavor as a treasure hunt for magical diamonds. Figure 1 depicts this treasure hunt. Full of joy and with an insatiable desire for adventure, you start on the left. Of course, you are in a hurry because the benefactors that finance your expedition (so that you share the diamonds with them) provide you

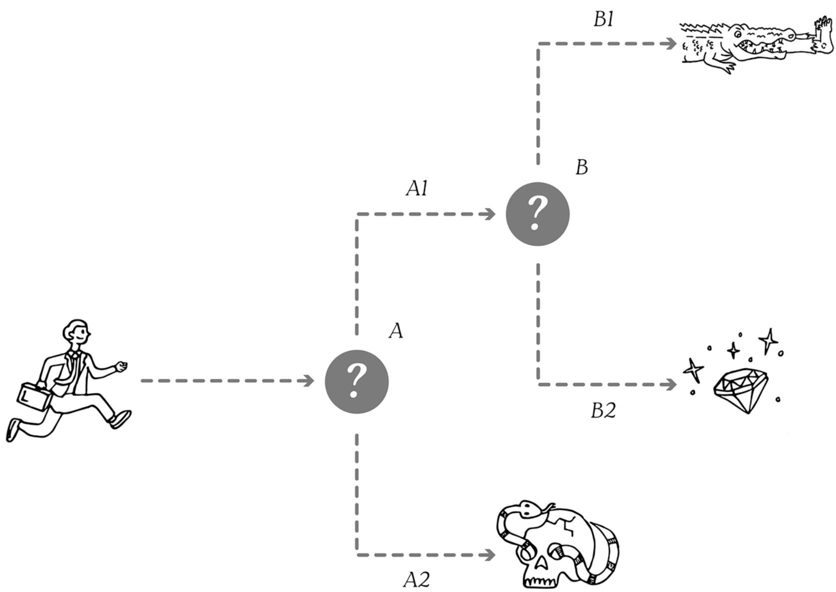

Fig. 1 Validation: A treasure hunt for a viable business. Authors' own figure

only with limited time and resources. You quickly reach point A, which offers two possible paths to continue. You have heard rumors that one of the two paths may lead to a painful death, but which one is it? Luckily, some locals live near the crossing, so you can talk to them to investigate. After carefully evaluating their experiences, you conclude that path A1 is safe to take. A2, however, leads to a treacherous den of poisonous snakes (ugh, you certainly want to avoid those!). You quickly pack your things (the clock is ticking) and continue your adventure on A1.

Following your new route, you become increasingly euphoric. You begin to pat yourself on the back, thinking of all the flattering articles the press will write about your success, that is,... until you reach point B. Another crossing! Of course, it could not have been that easy, right? Once again, you start to investigate by talking to locals. This time, however, you cannot gather enough information to figure out the best path immediately. You decide to experiment. You leave your heavy baggage at the crossing to stay agile and take a quick exploration tour to test path B1.

As you venture down B1, a sense of unease overcomes you. You have read accounts of how the road's final part should look, and the path you are on does not seem much like it. It doesn't take long until you realize what is wrong: crocodiles! You definitely do not want to face those, so you quickly turn around to go for B2 instead. Moving forward on B2, your spirits lighten up again. The grass around you seems greener, and even the sun shines brighter. Your excitement rises. Boom! Finally, you reach your destination—an ancient treasure chamber filled with more diamonds than you can carry. Indiana Jones would be proud of you.

Ignoring the urge to go rogue and keep the diamonds for yourself, how does all this relate to your start-up idea?

The Treasure Your Start-up Searches For Is Product/Market Fit

Like your treasure hunt expedition, your start-up will likely face resource constraints. Entrepreneurs often talk about their "runway." This term is start-up-speak for the number of months a start-up can keep operating before running out of money. A limited runway is one of the reasons you need to move with speed.

The treasure your start-up searches for represents product/market fit. In a nutshell, product/market fit consists of two components: first, identifying a target market that is big enough (number of customers, customer growth, and willingness to pay) to constitute a valuable business opportunity and, second, the development of a solution (product) that matches the needs of the customers in that target market and does so as well as or better than any of the present solutions of the competitors. Why is product/market fit the metaphorical equivalent of a treasure for your start-up? Although it is difficult to entirely disentangle what makes start-ups successful, we regard product/market fit as one of the best predictors for long-term start-up performance. This view is in line with the entrepreneurial wisdom widely spread among practitioners. It is also backed by the results of a recent panel study that examined new venture performance over 20 years (Gimmon & Levie, 2020).

The different paths crossing A and B open up for you equate to the assumptions you make about how to proceed when you choose a problem or develop a solution. Often, you will face different options to select from. These options may relate to various market segments (e.g., younger vs. older customers), design options for your product (e.g., different materials for a physical appliance), different channels to reach your customers (e.g., a bricks-and-mortar store vs. an online shop), or any other component of your business model.

Finally, the process of gathering and evaluating information on which path to choose translates into what we introduced as validation. Validation can take many different forms. As we will see in a bit, conversations with customers are often a solid way to figure out whether an assumption is accurate or not. Other times, you may have to conduct experiments to generate reliable data and, just like in our treasure hunt, do so in a lightweight way that allows you to turn around quickly if necessary.

The reason why validation is so important is that committing to the wrong path can lead your start-up directly toward those metaphorical dens of poisonous snakes or bloodthirsty crocodiles. There are many reasons why start-ups fail. In our experience, though, the most important reason (which comes in multiple flavors) is that unsuccessful start-ups simply never manage to build something enough people really want. Therefore, it is critical that you avoid time-consuming pitfalls and concentrate on product/market fit first. Validation is the magical ingredient that helps you do so without wasting valuable chunks of your start-up's runway.

Use Validation to Find Product/Market Fit and Keep It Once You Have It

Allow us to reiterate: The core of validation is to learn by testing assumptions. To test these assumptions, you generate and evaluate related information. The validated learnings you create support you in choosing a problem worth solving and developing a product as a solution to that problem; they help you in doing so as they ensure that you do not commit to a path that would prevent you from finding product/market fit before you run out of resources and money. Thus, validation increases the chances of your start-up to develop into a financially sustainable business.

Finding product/market fit is not a one-time event or check box to fill. Once you achieve it, you must make sure to keep it. As a result, validation is not a one-time activity either. Instead, it is a continuous, iterative process that remains important throughout your start-up's life cycle. This is true for the earlier phases of problem exploration and solution development as well as the later phases of business modeling and growth hacking.

Well-known serial entrepreneurs and entrepreneurship professors have written a variety of books propagating the various ways to facilitate decision-making throughout these phases. If you read these start-up advice bibles, you will encounter different flavors of validation that serve as an integral component of the strategies and heuristics they introduce. At their core, these flavors of validation follow the same generic pattern. In this book, we refer to this pattern as the generic validation blueprint.

The Generic Validation Blueprint: Validate in Three Steps

Our generic validation blueprint is based on what Stanford professor Steve Blank terms "the scientific method to entrepreneurship" (Blank & Eckhardt, 2023) and Harvard professor Thomas R. Eisenmann refers to as "hypothesis-driven entrepreneurship" (Eisenmann et al., 2011). It consists of three steps: (1) reflect, (2) inquire, and (3) learn. Combining the first letter of each step results in the acronym "RIL." Figure 2 depicts the blueprint.

The three steps are arranged as a circle because they constitute an iterative process. Once you have validated a set of assumptions by going through a complete iteration of the circle, you start again with step one and a new set of assumptions that need testing. Thus, you engage in a sequence of iterations that lead you from assumption to assumption and guide your decision-making.

Validation Step 1—Reflect In the first step of our blueprint, you identify assumptions about your start-up idea that need testing. We have found the following three cues to be helpful to do so:

1. Ask yourself what has to be true or go right for (a specific part of) your idea to work.
2. Ask yourself what you believe to be implicitly true even though you have not tested it yet.

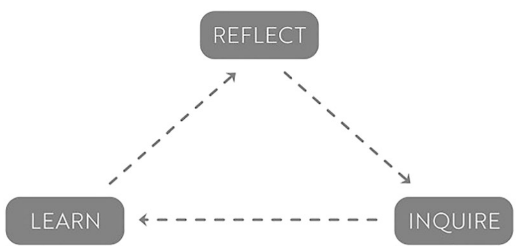

Fig. 2 Three steps of validation: reflect, inquire, and learn (RIL). Authors' own figure

3. Apply the first two cues to ideas about each component of your business model.

When using these cues to search for those assumptions that need testing, it is imperative to acquire a mindset of asking the scary questions first and learning to love bad news. Some founders appear to have a natural inclination to avoid testing assumptions that, if they turn out to be wrong, would kill their ideas. This is the very opposite of what you should do. Why? Remember that your start-up's runway is limited! Finding out early that you are on the wrong path is, in fact, great news because it prevents you from investing further resources in something you would ultimately have to abandon anyway.

Let's say, for example, that you already have a product and consider selling it to a new, additional customer segment. Having multiple conversations with customers from this new segment in advance and finding out early that they may not view the problem you are solving as worth paying for would not be bad news but, in fact, great learning. Based on this learning, you can now make the deliberate decision not to invest in product changes or marketing efforts that are tailored to this specific customer segment. Thus, you save resources that otherwise would have been a waste of your start-up's precious runway.

Validation Step 2—Inquire In the second step, you generate data (i.e., feedback or other information) on the assumptions that you want to test. There are various potential sources of data and techniques to collect it. In our experience, though, Table 1 includes the ones founders will most often use. We refrain from prescribing universal guidelines on when to employ which technique. Instead, we encourage you to actively think about how you can credibly test your specific assumptions at hand. Nonetheless, there are some guiding principles we have found to be helpful during this step:

- *Customers are the most essential source of data.* Whether it is conversations, surveys, or experiments, prioritize feedback from your customers because they are the ones who will use (and, in most cases, pay for) your product. This will also help you identify cases in which industry experts, who often do not have direct contact with customers, may

Table 1 Six helpful validation techniques

Technique	Explanation	Example
Customer conversations	Speaking to customers and asking questions that generate insightful answers. This includes informal conversations and formal customer interviews.	A founder who wants to develop a vegan cheese alternative attends a vegan food festival and speaks with other visitors about the criteria (e.g., nutritional value) they use to evaluate vegan products.
Surveys	Sending out a list of questions to generate data from a particular group of people. Usually done using dedicated online tools.	To get a broad idea of how students may evaluate vegan replacement products, a student founder shares a survey link via her social media channels. The survey asks for basic demographics and the importance of various criteria identified during previous customer conversations. The survey also includes open questions allowing participants to add and describe new evaluation criteria.
Expert conversations	Speaking to industry experts, investors, fellow entrepreneurs, employees of potential partner companies, or other relevant stakeholders.	A founder who wants to develop a new AI-based waste sorting system speaks with employees of a waste disposal company to better understand the sorting processes that are currently in use.
Desk research	Identifying and synthesizing information that already exists. Usually done with a search engine.	A founder searches for market reports, industry reports, and press articles that are related to her idea.
Observation	Observing customers while they encounter the problem a start-up is working on or while they use a current solution to it. Current solutions include prototypes of the start-up, competitor products, or customer-made solutions.	A start-up that develops an app that teaches programming skills invites customers to its office and watches them use the app to identify friction points that negatively impact the user experience.

(*continued*)

Table 1 (continued)

Technique	Explanation	Example
Experimentation	Testing new ideas in a protected environment or the real world. Often done by building a lightweight version of a product (minimum viable product), shipping it as a beta version to customers, and collecting data on product usage or purchases. Often combined with other techniques.	A start-up that delivers freshly cooked Korean food to offices is considering adding a subscription meal plan option. In a pilot program, it offers the subscription plan to a select group of existing customers. The start-up uses regular surveys to track key metrics such as retention and satisfaction.

Table compiled by the authors

have inaccurate views and, thus, accidentally discount valuable business opportunities.

- *Use qualitative and quantitative data.* Typically, you will rely heavily on qualitative (i.e., verbal) data gathered in customer conversations early on. Speaking directly to customers during the early start-up phase will not only help you generate data on assumptions but also lead to a better understanding of the lives of the people who use and buy your product. As you get access to a growing customer base, data generation may get more quantitative, involving surveys and some number crunching to increase the reliability of your learnings. Nonetheless, qualitative data will remain helpful because it allows you to generate in-depth knowledge of underlying customer motives.
- *Doing it badly can be worse than not doing it at all.* It is crucial to avoid flawed data that would misinform your decision-making. A frequent case of flawed data is the fake market reports offered on websites of rogue market research providers. Always check the credentials of authoring institutions and the employed methods to avoid basing your decisions on questionable or made-up numbers. Another typical case is false positives that you may generate in customer conversations. Founders often ask potential customers directly whether they would

buy their product once it is finalized and then receive an unequivocal "yes." They are then surprised to see that none of these customers end up purchasing the product. We will introduce a way to avoid these situations in a bit when we describe how to use the generic validation blueprint during problem exploration.
- *Get out of the building.* Although there are rare cases of finding valuable nuggets of data through desk research, most of the time, you will have to leave the environment you usually work in (your office and sometimes even your town) to interact directly with potential partners, experts, and, above all, your customers.

Finally, when should you stop data generation for an assumption? Once again, we encourage you to make a judgment call. Do not overcomplicate things and paralyze yourself with endless efforts of data collection. Instead, seek to keep things lean. Move with speed. Aim for a state of reasonable confidence that you have support for or against an assumption. Referring to our validation metaphor, think of simply trying to increase the likelihood of choosing the correct path. Sometimes, it may be okay to only engage in some initial digging and walk into the seemingly best direction to explore an option. In fact, this experimentation can be a helpful tool for gathering new data itself. However, the more severe the consequences of choosing the wrong path and the more difficult it is to turn around to try another one, the more time you should invest in gathering additional data before you settle on how to move forward.

Validation Step 3—Learn In the third and final step, you evaluate your data to determine whether you have support for or against an assumption and, based on this, generate learnings that inform your decision-making.

As a basis for your evaluation, we advise you to first briefly take notes on your inquiry from step two. The word brief is essential here. Do not overburden yourself with an excruciating amount of note-taking. Once again, you will want to keep things lean to avoid paralysis. Your note-taking should aim at two things: First, you want to make sure that you remember important details even after a couple of weeks have gone by.

Second, force yourself to synthesize significant bits of conversations, web resources, or surveys in concise bullet points to ensure that you have properly thought them through. Two or three short bullet points per assumption per data source (e.g., a customer conversation) will usually suffice.

Ideally, you should conduct this brief note-taking simultaneously with the inquiry step. For instance, once you have finished a customer conversation, immediately take a few notes that capture the most critical bits of information from this conversation. Nonetheless, we regard this as a part of step three because the very process of writing notes itself often results in new learning.

Next, you should regularly evaluate your notes. Keep the notes and other data you have collected accessible to make it easy for you to go back to them. Re-examine them whenever you feel like you may have gathered enough data to conclude on an assumption. Compare your findings from different data sources to identify similar patterns and reasons why some of your sources may provide conflicting information. In some cases, you will find that you need to go back to step two and gather additional data to make sense of your findings. In other cases, you will be able to make a reasonable decision on whether you have support for or against an assumption. As a result, you will learn something about the environment your start-up operates in and how you should proceed.

Once you made a decision on an assumption, we advise you to document this conclusion briefly as well. Keep a list of your learnings and explain these learnings in two to three sentences. Doing so will help you later down the line in two important ways: First, it will increase your understanding of why you have made a specific decision and why (a couple of months later) this decision may have to be revised. Second, it will help you communicate what you have learned to existing and new team members.

We want to emphasize that you need to organize the learning step in a way that works best for you, your team, and the current stage of your start-up. Whether you use a smartphone app, a physical notebook, dedicated software, or a combination of different tools—find something that works for your specific situation at hand. Keeping the following three principles in mind is helpful when experimenting with various options:

- *Easy access is vital.* The easier the access to your notes, the more likely you will engage in note-taking. Digital tools such as notebook apps or spreadsheets are often a simple way to ensure easy access. For instance, you can pin notebook pages to your smartphone screen to have them readily available whenever you come across a potential customer you could talk to.
- *Keep it lean.* The idea of engaging in iterative validation is to move with speed and efficiently identify how to move forward. If the learning process starts to cost your team excessive amounts of time and slows you down, the chances are good that you overdid it and need to simplify.
- *Your entire team needs to learn.* Once your start-up consists of more than one person, it is crucial to disseminate what you have learned to the whole team. Sometimes, founder teams succumb to the temptation to separate product development and customer research. We have found this to be particularly common in interdisciplinary teams, where engineers end up focusing on building the product while the nonengineers speak to customers. However, even though it makes sense not to waste precious engineering resources, it is imperative to involve every team member in your start-up's learning process. At a minimum, you need to distribute and explain the learnings to everyone on the team. Ideally, though, even engineers are actively involved and have at least occasionally direct contact with customers and other stakeholders. This approach will boost everyone's commitment to learning-based decision-making, rendering your teamwork more efficient.

Applying the Blueprint to Validate Your Problem

At their core, start-up ideas are about solving real-world problems. To be successful, start-ups need to tackle problems a substantial number of people or organizations consider urgent enough to be willing to pay someone for a solution. Of course, you want your start-up to perform well. This leads to an important question: How can you make sure that you work on a problem that enough potential customers consider to be urgent to them?

Answering this question aims to decrease what entrepreneurship scholars have coined as customer or market risk (Blank & Dorf, 2012). In the beginning, you often do not know yet whether a large enough customer base, that is, a market, exists for your problem. As a result, you should seek to increase the likelihood that you are working on something enough customers deem important to them. To put it differently, you should try to manage your customer risk. Our generic validation blueprint resembles an excellent tool for this task. When you validate assumptions about the world you operate in, you decrease uncertainty and, thus, risk, which then allows you to make a more informed decision on how to proceed.

We have already indicated that the specific validation techniques you use when applying the blueprint must be chosen based on what is appropriate for the current situation at hand. To develop an in-depth understanding of your problem and market, you will often have to combine a set of different techniques. Chances are that you will have to run through numerous RIL iterations using customer interviews, surveys, industry reports, and more. Most likely, you will end up redefining the problem you work on multiple times along the way. How long should you keep focusing on this process of problem validation? In our work with entrepreneurs, we have found that start-ups should continue until they can answer, based on data, at least the following six questions:

1. Can you state your problem clearly in two sentences?
2. Who are your customers?
3. Who is the ideal first customer?
4. How often does your customer have the problem?
5. How intense is the problem for your customer?
6. Are your customers willing to pay for a solution to the problem?

Start Validating Your Problem by Talking to Potential Customers (the Right Way)

Having worked with numerous start-ups at an early stage, we have seen many founders who struggle with early problem validation because they simply do not know where to start. Chances are that you will feel the same. What should be your first step when you try to improve your understanding of the problem? Whenever you encounter some level of customer risk (which is almost always the case), we advise you to start by talking to potential customers. Apply the generic validation blueprint. Identify a couple of critical assumptions about your problem and start validating them through conversations.

At the beginning of your entrepreneurial endeavor, conversations with potential customers are a great validation tool for numerous reasons. First, having direct contact with potential customers will improve your understanding of who your customers really are. Second, conversations cost almost nothing. Third and finally, they are easily accessible if you are willing to leave your desk and venture out into the real world. Are you developing a new app for students? Visit the nearest university and speak to the students on campus. Are you working on solving an annoying problem for software developers? Ask a friend who is a programmer whether you can invite her over for a coffee. Talk to her. Then, ask for introductions to other developers who may be interested in free coffee as well. You will be surprised by how happily people talk to you if you are genuinely interested in their problems without trying to sell something to them.

As a result, it would be best if you refrained from thinking of these conversations as formal customer interviews as long as possible. Experts like Rob Fitzpatrick, who has written a popular book (*The Mom Test*) on how founders should talk to customers, suggest keeping these conversations as casual as possible to reduce the likelihood of generating flawed information (Fitzpatrick, 2013). Once you start treating your conversation partner like someone with whom you want to sell something to, you introduce a transactional element to your conversation; doing this may trigger your conversation partner to say things they do not really mean.

A typical example of this is false positives. Founders sometimes succumb to talking extensively about their ideas and enthusiastically explaining how great their solution is going to be. Often, this causes their conversation partner (consciously or unconsciously) to confirm what they hear so as not to hurt the founder's feelings, leading to vague commitments to purchase the product that never materialize.

How can you avoid false positives and other kinds of misleading information? Rob Fitzpatrick (2013) suggests adhering to the following three principles during conversations to reduce the likelihood of generating flawed data:

- *Talk about your customer's life instead of your idea*. Try to avoid mentioning your idea and solution (product or service) for as long as possible. Instead, focus on the problem and how the problem manifests itself in the lives of your customers.
- *Ask about specifics in the past instead of generics or opinions about the future.* Do not rely on opinions or vague statements on how significant the problem is, how frequently your customers encounter it, or whether they are willing to pay for it. Try to generate specific statements by asking for past experiences. How often did the potential customer encounter the problem last month? Has she already tried to solve the problem herself? Has she already tried to pay someone for a solution?
- *Talk less, listen more.* Your conversation partner should do the main part of the talking. Ask questions and follow-ups to get the other person talking and resist the urge to provide explanations or introduce your perspective. This will decrease the degree to which you bias what the other person says.

The Icebreaker Example: How to Start Validating a Problem

Let's conclude this chapter by looking at a specific example of how to start with problem validation. A couple of years ago, one of the incubation programs at our university included a team of young students who intended to develop a new dating app (yikes, yet another dating app!). They referred to the app as "Icebreaker." Their starting point was the observation that some of their friends hesitate to approach someone they like, for example, while in a bar, because of fear of getting rejected. The app was supposed to offer users an option to discreetly exchange messages with nearby singles who also use the app to figure out whether they should get in touch with each other. Thus, the app would help "break the ice" between two people who may be interested in each other. Let's assume we start working on this Icebreaker idea. We decide to apply the generic validation blueprint to explore whether there is an underlying problem worth solving.

Reflect. We begin by asking ourselves what must be true for the Icebreaker idea to work and whether any implicit assumptions need testing. We identify two fundamental assumptions that would kill our idea if they were wrong.

1. People sometimes hesitate to approach someone they like because of fear of rejection.
2. People want more precise signals of whether they should approach someone.

Inquire. We decide that customer conversations are an appropriate validation technique to test our two assumptions. After thinking a bit about where to find potential customers, we argue that bars may be a proper location. People in bars are more likely to be young, single, and interested in getting to know someone. We start to have casual conversations with random people we meet in our favorite bars. We do not mention the Icebreaker idea (at least not initially). Instead, we weave in questions that will result in answers relating to our assumptions. Our conversations range from 5 to 15 minutes, which allows us to talk to multiple potential customers per evening. (Fun fact: Speaking to random strangers in bars is what our student team ended up doing. One of their learnings was that talking about the Icebreaker idea was itself a great way to break the ice).

Learn. Whenever we finish talking to someone, we quickly write down a few bullet points on what was said. We do so in a digital validation table that we pinned to our smartphone screen to have it readily available. Table 2 is an example of what such a validation table might look like.

Each row represents a unique source of data (i.e., a person we talked to). The first column contains essential information on each source (e.g., some demographics or relevant behavioral information we remember). The second and third columns relate to the two assumptions that need testing. The headings of these columns contain the assumptions expressed as a short sentence. The cells below the headings contain the essential bits of information provided by each source (row) on the given assumption (column).

Table 2 Validation table outline. Table compiled by the authors

	Assumption 1: People sometimes hesitate to approach someone they like because of fear of rejection	***Assumption 2:*** People want more precise signals of whether they should approach someone
Source 1: Student, Joshua, 25y, single, uses no dating apps, shy	• There was this girl last week in our favorite bar. I really regret not talking to her, but her friends always surrounded her, and I did not want to embarrass myself. • Happens like once a month, at least when I am going out a lot and don't have to study for exams.	• It would make things so much easier; I tend to be nervous. • Before I approached my last girlfriend, I got a hint from her best friend that I should try my luck.
Source 2: Student, Karen, 24y, single, uses one other dating app, open and communicative	• Usually, I don't do the first step. • Sometimes, I can see that someone I like wants to talk to me but doesn't have the courage.	• It might decrease the thrill of approaching someone or being approached. • It could be helpful if I really like someone.
…	…	…

Over the next week, we will make use of more everyday situations (in bars, at bus stations, etc.) to have customer conversations. We talk to a total of 35 people and document the most informative bits of what they said in our validation table. When we finally analyze our notes, we become confident that we have support for our two assumptions. In a separate spreadsheet, we document a few preliminary learnings, thus completing our first RIL iteration:

1. Some people encounter situations in which they hesitate to approach someone they like because of the fear of rejection, especially when other people are around.
2. Young men seem to encounter these situations more frequently than women.
3. Some people would find it helpful to have more precise signals that tell them if they should approach someone.

Are these learnings representative of the entire population of singles? Obviously not. However, finding statistically significant and representative proof was not our goal here. We simply explored whether there are at least some people who encounter the problem to make sure we would not waste our time on an outlandish idea. Further, we improved our understanding of the problem and generated input to think of further assumptions that need testing. These assumptions may pertain to questions on how different groups of people think about the problem (gender groups, age groups, etc.), differences depending on where people encounter the problem (in bars, clubs, gyms, etc.), the representativeness of our findings, and other factors that help us better understand the problem and the people facing this problem. Thus, we set the basis for further RIL iterations that guide our next steps.

Would we ultimately find a problem that constitutes a valuable business opportunity if we proceeded? Frankly, we don't know. Even though our student team was confident the Icebreaker idea was onto something, they eventually decided to pursue other dreams. Rumors have it that one of them enrolled in a doctoral program and is a co-author of this book…

Three Things To Do Right Now

1. Take a look at the validation table of the Icebreaker example. Create a copy with empty rows. Call one friend by phone to generate information on the two assumptions. Document your results. Repeat with one friend in person. Repeat again with one random stranger during an everyday situation (e.g., at a bus station or in a bar). Reflect on whether you managed to adhere to Rob Fitzpatrick's three principles of "the Mom Test."
2. Identify three critical assumptions relating to an idea you would like to work on. Use the cues from this chapter if you get stuck. Create a digital version of a validation table and document the assumptions in its columns. Pin the table to your smartphone start screen.
3. Think about how to find helpful conversation partners to validate your assumptions. Specify where to find these people, how many people you want to talk to, and when you want to complete the first RIL iteration. Create related entries in your calendar or to-do list.

Further Down the Rabbit Hole

- Andreessen, M. (2007, June 25). *Part 4: The only thing that matters*. Pmarchive. https://pmarchive.com/guide_to_startups_part4.html

This blog post briefly and entertainingly illuminates the perspective of a venerated venture capitalist on the importance of product/market fit.

- Fitzpatrick, R. (2013). *The mom test: How to talk to customers & learn if your business is a good idea when everyone is lying to you*. Robfitz Ltd.

This handbook provides a deep dive into how to have productive conversations with customers in only 120 pages. It includes hands-on advice and practical examples.

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From Concept to Creation: Mastering Entrepreneurial Prototyping and Product Development

In this chapter, you will learn …

… how to get the best visual impression of your idea with only a few resources,
… why funders do not like too much detail about your prototype, and
… how to bring your idea to life (or paper will do).

Visuals Speak Louder Than Words

The iPhone did not fall from the sky. Likewise, your innovation will inevitably take time, diverse materials, tools, formats, numerous iteration steps, and feedback loops until it reaches its final shape and is ready to be sold. Let's face it, as an aspiring entrepreneur bursting with drive, you can't wait to share your idea with the world fast enough, can you? You probably want to put all the effort and hard work into your innovation, polishing it to perfection so that you can reap the rewards of your creation in the shortest possible time. Do not get us wrong, this might work out. But you want to create a product that customers really demand. In this light, prototyping will help you to deliver the desired product.

A. Kuckertz et al., *Mastering Your Entrepreneurial Journey*,
https://doi.org/10.1007/978-3-031-71064-3_5

From its origins in manufacturing to its applications in user interface development and software engineering, the method of prototyping has become an integral part of the dynamic start-up landscape. As the name suggests, a prototype is the first of its kind characterized by specific features. The prototype represents a simplified image of a final product and is mainly used for testing purposes (Floyd, 1984). The term “first” needs to be understood in a figurative sense. Your prototype will undergo many changes, take on different variations, gain or lose features, and, thus, come closer to your final product step by step. Therefore, prototyping takes place as part of the preliminary stage of product development.

Before we delve deeper into the world of prototyping, it is worth taking a brief detour into the field of consumer behavior as a way to understand the complex cognitive processes of the human brain and apply them to prototyping. Different types of stimuli, such as semantic, auditory, or visual stimuli, challenge the ease of how we process information. This so-called processing fluency (the ease of processing information) tends to increase with visual-oriented experiences (Jia et al., 2014). In this context, Winkielman et al. (2006) have conducted an experimental study illustrating how looking at abstract prototypes triggers positive affective reactions because our brain processes the stimuli of a minimalistic object more quickly. However, this effect also depends on repeated exposure and prototype characteristics, such as the number of features.

As a result, while your idea is initially a construct in your mind, the art of prototyping is to make the abstract tangible. Consider your prototype as a device to translate your thoughts and ideas into visual language others can understand. In this chapter, we will show you how effective prototyping can sustain your entrepreneurial endeavor and what techniques you can implement.

Why You Should Start to Prototype Your Idea

Why should you start prototyping early in your start-up journey? There are many compelling reasons. One of the biggest challenges for entrepreneurs is a lack of funding. Prototyping can be a game-changer in this regard, as the study conducted by Wessel et al. (2022) demonstrates; the researchers show that, in a crowdfunding setting, business angels or venture capitalists are more likely to finance nascent entrepreneurs with prototypes than the ones without. By presenting a prototype to financial stakeholders, you are signaling that you have advanced from the ideation phase in a way that your entrepreneurial endeavor is gaining substance. The logical conclusion from this finding would be that you need to finance your first prototype (and possibly its successor) yourself to obtain funding for its further development. The good news is that your prototype does not need to be perfect to attract funders. Investors' intrinsic motivation to support an idea comes when the prototype is not overloaded with features. In other words, high levels of progressiveness of the prototype signal a fait accompli and reduce the activity of follow-up collaborations.

Additionally, Audretsch et al. (2012) find that prototypes, along with patents, help entrepreneurs overcome information asymmetries while developing their business concepts. This is because, especially in the earliest stages, nascent businesses typically have knowledge-based and intangible resources at their disposal that can be difficult to apprehend by external parties. Interestingly, the researchers note that patents alone are not enough to attract investments from venture capitalists and business angels. To obtain a significant positive effect in terms of funding, a patent should be combined with a prototype.

In sum, a prototype serves two overarching functions: demonstrating feasibility and overcoming accessibility barriers. Understanding both functions is essential when you approach different stakeholders with different goals. On the one hand, investors or potential supply chain partners are mainly interested in the feasibility of your innovation, which you can prove with the prototype. On the other hand, a prototype that you not only present to potential customers but also involve the end users in its specification provides information about the actual market demand. This type of collaborative prototyping incorporates different user perspectives, helping identify pain points and solve problems right at the beginning (Bogers & Horst, 2014). Finally, do not hesitate to share your ideas, even if you do not feel they are mature enough yet. Instead, prototypes can be utilized as a powerful tool to condense, transfer, and absorb knowledge. The earlier you start, the better.

Moving in Cycles Toward Your First (and Next) Prototype

Creating your first prototype is a crucial step in your start-up journey. It should be quick to develop, efficient in its functionality, and resource efficient. An early take-off in prototyping prevents risks because it helps avoid costly errors in the final product development process. You are probably familiar with concepts such as build-measure-learn or the minimum viable product as part of the lean start-up framework. If not, here is a quick explanation: The key is to reduce the prototype to its minimum attributes and make changes gradually based on iteration, feedback, and constant improvements (Shepherd & Gruber, 2021). Prototyping serves as a kind of umbrella term for these concepts.

Bogers and Horst (2014) distinguish between a managerial and designer prototyping process. Building on the four phases of designing, building, running, and analyzing, the main difference comes with the speed and agility of the person creating the prototype. Although designers can quickly implement changes, managers often rely on timely decision-making processes. As a budding entrepreneur, you occupy a unique position—an intermediate stage. You might not have the resources or experience to act as swiftly as designers. Still, the advantage is that decision-making paths are shorter and that you have a broad range of responsibilities within a small team. This allows you to deal with cross-cutting issues and engage in short design, testing, and evaluation cycles. Before we guide you through the four individual phases (Fig. 1), it is crucial to understand that the phases are not to be understood as clearly distinguished from each other. The development of a prototype stems from the ability to translate new findings into practical applications fluently. Now, let's explore each of the four phases and get you involved in some hands-on practices.

(1) ***Design.*** It might not seem very hands-on to advise you to start doing your research first. However, as passionate researchers ourselves, we count on doing our research as an integral part of the design phase. Focus on the core of your innovation: What specific value do you aim

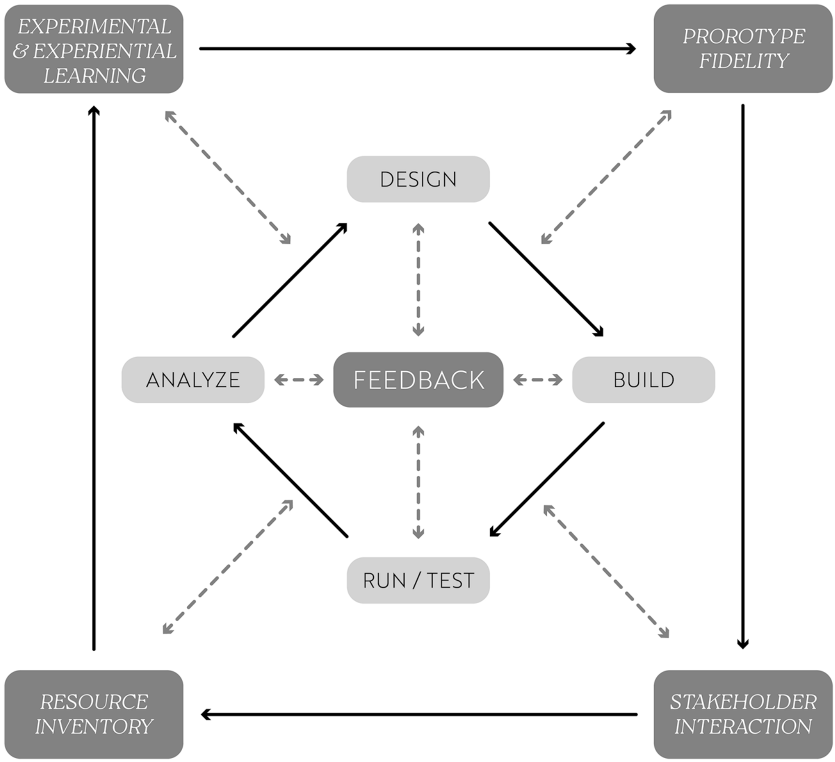

Fig. 1 Prototyping cycles. Authors' own figure based on Bogers and Horst (2014)

to create? How will you achieve it? The research encompasses information on materials, processes, technologies, your target market, and an understanding of your competitors. Of course, all gathered insights will not directly flow into your (first) prototype. But they will help you to grasp the entire picture and find a starting point.

Additionally, as you progress, you begin incorporating the perspectives of your stakeholders and prospective customers into the already existing mental concept of your idea. Start with basic interviews or conversations about your customer's daily life routines or explore broader contexts that are related to your innovation to uncover the real need(s) you want to serve (Auernhammer & Roth, 2021). By working backward from your customers' needs to your innovation's value proposition, you will ensure that your prototype and, thus, the subsequent product development revolve around the future customer.

The following example shows that it pays off to create a prototype early on: SafranMatters, a start-up based in southwestern Germany, set out to introduce precise and modular robotics to agriculture, specifically to automate the laborious process of harvesting saffron. Shortly after coming up with the idea and actually before it had become a proper business concept, the team started building a functional prototype. Its purpose was to demonstrate that saffron flowers could be cut automatically, meaning the innovation could improve working conditions. Doing so led to their first funding, allowing them to develop their prototype further.

(2) ***Build.*** In the next phase, build, the goal is to visualize your innovation's key attributes. Do not worry if you lack a specific skill or tool to reflect a feature or function you have in mind in real life. The visualization can be very abstract, not inaccurate, but reasonable. Your prototype should embody those attributes (visual and functional) that are essential for conveying your innovation's core message to consumers. However, be cautious about making this message too complex and strike a balance between simplicity and detail. Professionally speaking, this so-called prototype fidelity reflects the degree to which the prototype corresponds to the final product. Prototype fidelity should not be seen as two extremes, either low or high, but rather as a continuum that stretches between these two ends along multiple dimensions. The dimensions that define a prototype are as follows:

- ***Look & feel:*** Color, shape, size, and texture determine the handling and visual appearance of the prototype.
- ***Functionality:*** The purpose and usability of the prototype allow the users to create experiences based on trials.
- ***Features:*** The type and number of properties of the prototype distinguish its unique selling point.

In terms of materials and tools, you have various options, from simple paper prototyping to using toy building bricks, digital imprints, experiments, 3D-printed prototypes, or even virtual prototypes via augmented or virtual reality. The technique you choose is not only a question of resource availability but also affects the appearance of your prototype and, thus, the interaction with stakeholders and prospective customers (Wessel et al., 2022).

Consider SafranMatters once again: The team started building the prototype right away using chipboards, wheels, a camera, and electronics, most of which came from their own materials. In part, they also had to be procured from scratch. This was financed by private means and by the help of family. The size and shape of the prototype already gave the impression of a handy harvesting robot for field use.

(3) ***Run.*** During this phase, take your prototype out for testing purposes by presenting it to prospective customers or stakeholders. Try to gather insights from people from all walks of life—whether they are strangers you just met, neighbors, friends, or family members. All feedback is valuable. At the same time, potential customers can link the prototype with the features of competitors' products and draw conclusions about your innovation's uniqueness (Bogers & Horst, 2014). The testing phase also applies to different kinds of materials, ingredients, or tools you might want to use for product development. Some tests require specific environments such as laboratories or field work. For this purpose, reach out to different manufacturers, local farmers, or recycling depots to ask for (free) samples or trials. If you are facing rejection, think about what you have! Look in your resource inventory and see what is lying around, or maybe start experimenting in your kitchen. The study by Wessel et al. (2022) has an essential message for you: Your prototype does not have to be extraordinary to receive new resources for the next iteration cycles.

Again, SafranMatters' aim of the functional prototype was to test the core functions at a low cost. Based on this, the start-up team jointly evaluated the automated harvesting procedure with the farmers and identified areas of improvement. Accordingly, only the cutting heads as critical attributes of the innovation were changed during the testing phase. Based on this, the start-up team introduced a second prototype, one incorporating new functions (such as a traction drive), made of higher-quality materials and that had a more professional look. For better planning and resource allocation, this subsequent prototype followed a previous digital concept.

(4) ***Analyze.*** The analysis part will go hand in hand with the previous phases because each provides learning outcomes. It is advisable to document every change your prototype undergoes and note the comments given by your audience. In addition, consider taking pictures of each prototype version to track progress and revert changes, if needed.

In line with Bogers and Horst (2014), we emphasize a fifth—and indeed very essential—step: ***repeat***. Each iteration of these four phases refines your need-focus and product specifications. Although it might seem like many iteration loops, moving in cycles and adapting in small steps can conserve valuable resources, especially in the early stages of your venture. So even if you are probably aiming for a managerial career path, it is worth it to channel your inner designer.

About the Prototyping Skillset and the Prototype's Last Call

Flexibility, adaptability, and an open mind are essential qualities for entrepreneurs. Prototyping exemplifies how these characteristics shape the entrepreneurial journey. Honestly speaking, we should add some sort of "creative capability" when it comes to active prototyping because the range of possibilities seems endless. Just as your entire entrepreneurial endeavor demands experimental and experiential learning, prototyping follows suit (Auernhammer & Roth, 2021). There are no rigid rules on how or where to start. Maintain an agile and communicative approach as you design, build, run, and analyze. In this way, you can navigate unpredictable changes and effectively adapt to external influences. In the end, you want to create a prototype that best reflects your idea or innovation, given the resources at hand, by showing what is practically feasible and that your endeavor is worth investing in.

As your prototype slowly but surely develops into the final product (or at least comes very close to it), the most important components come into focus: the ability to recognize when feedback does not bring in new insights and the prototype being ready to serve as a sample for product development. Sketches transform into edges, analog becomes digital (or vice versa), and specific entities replace proxies. But where do you source the necessary components or skills for the final product development? Perhaps you have already noticed that an advanced prototype represents a first draft of a possible supply chain. For more on how to proceed, check out the next chapter for guidance on defining your business model and bringing the right partners on board for your entrepreneurial journey.

Three Things to Do Right Now

1. Write down the core attributes (based on the value proposition) of your idea and think of ways to demonstrate them using different objects, symbols, or materials. What makes your innovation stand out? This is where your imagination comes in. Do not miss the chance to communicate your endeavor to external parties, which can allow room for need-finding and collaboration.
2. Grab the nearest objects (e.g., paper, pen, or laptop) and start transferring your idea into something practical, be it a paper sketch, a physical model, or a digital depiction. This is your creative moment where you craft your first prototype.
3. Present your prototype to potential customers, family, or friends to receive feedback for your idea's or innovation's subsequent iterations and development steps. After that, start prototyping again!

Further Down the Rabbit Hole

- Knapp, J., Zeratsky, J., & Kowitz, B. (2016). *Sprint: How to solve big problems and test new ideas in just five days*. Simon & Schuster.

When time is short, this book guides you with clear instructions from idea to prototype through the next five days. Drawing on their experiences at Google Ventures, the authors provide practical advice, real-world examples, and actionable steps to make quick progress.

- Warfel, T. Z. (2009). *Prototyping: A practitioner's guide*. Rosenfeld Media.

In this book, Todd Zaki Warfel introduces the various principles, tools, and methods of prototyping from the perspective of a user experience designer. Warfel's book serves as a valuable resource for practitioners looking to enhance their prototyping skills and create more consumer-centered designs.

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Architecture of the Venture: Understanding Business Modeling

In this chapter, you will learn …

… how the business model frames your entrepreneurial venture,
… how to successfully assemble the components of the business model to realize your (monetary) objectives, and
… why your business model is not set in stone.

Business Model Madness

Starting your own business comes with several tasks, options, and decisions. The business model question is probably one of the most important decisions of the entrepreneurial endeavor because it legitimizes the project, represents it to the outside world, and points the way to future developments. And by the way, the business model also determines how and whether you will earn money. Given the abundance of business model frameworks, templates, and designs, choosing a suitable business model for your unique business case can be challenging. After all, if you want to sell an innovation, you may wonder why you should try to fit it into preconceived templates and models.

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The answer is simple: For a business model to really work—meaning the implementation of interrelated activities to generate value to monetize this particular value for a group of interests—the presence of specific elements is indispensable. Many theoretical definitions of business models exist. What they have in common is that they all describe how an entrepreneurial venture generates profit through value generation. For instance, Teece (2010, p. 172) states it as follows:

> "A business model defines how the enterprise creates and delivers value to customers, and then converts payments received to profits."

Although the business model and business strategy are often confused, the two are distinct subjects an entrepreneur faces. Your business strategy usually aims to realize a competitive advantage by specifying and implementing actions based on a series of prioritized choices. Your business model adds to this by establishing a framework for making such preferred choices (George & Bock, 2011).

According to Osterwalder and Pigneur's (2010) well-known business model canvas, a business model rests on nine components: (1) value proposition, (2) key partners, (3) key resources, (4) key activities, (5) customer relationships, (6) customer segments, (7) channels, (8) cost structure, and (9) revenue streams. Do not worry. We will not guide you through another application scenario of the canvas because there are already plenty of them out there. Instead, we want to familiarize you with the logic behind the business model components and how they act as interlocking gears of your entrepreneurial endeavor. In principle, these nine building blocks can be assigned to four categories: value proposition, value creation, value delivery, and value capture (Table 1). No

Table 1 Categories of business model components based on Osterwalder and Pigneur (2010)

Value proposition		
Value creation	***Value delivery***	***Value capture***
• Key partners • Key resources • Key activities	• Customer relationships • Customer segments • Channels	• Cost structure • Revenue streams

Table compiled by the authors

matter how unique your entrepreneurial endeavor is, there is no way around these elements.

More precisely, the overall business model revolves around the value proposition, the identity of a product or service that makes it desirable to a customer or user over other solutions on the market. Let us clarify that, with "customer," we refer to both businesses and individual consumers. Value creation encompasses the system of activities necessary to fulfill the promised value. Accompanying this, you should reflect on sales and marketing operations to allow customers to access your product or service (value delivery). Ultimately, the exchange of goods occurs (mostly) through monetary means for the purpose of value capture. Based on this, the business model evolves and eventually reinvents itself—product-wise, functionally, or strategically. If this still sounds a bit vague, the below paragraphs will equip you with more details.

Look Left or Right for Business Model Inspiration

In entrepreneurship, there are (hardly) any predefined structures, giving you the power to develop an entirely new organizational setup. In their case study on aspiring FinTech start-ups, McDonald and Eisenhardt (2020) offer a unique process for developing and testing effective business models in an entrepreneurial context: parallel play. The concept literally alludes to two players who act entirely independently of each other by exerting no influence on one another but can look over each other's shoulders occasionally. In a start-up context, the parallel play process assists entrepreneurs in nascent markets. It depicts the design of the business model inspired by both new and established players. Copying, or as McDonald and Eisenhardt (2020) put it less radically, borrowing, is allowed.

The case study results make it clear: You do not have to have it all figured out from the start. Instead, start-ups that adopt ideas from peers or even terminology from established players in neighboring industries develop more effective business models than those striving to be unexceptionally unique. In other words, peers are sources of idea generation, and incumbents indicate legitimate business model components because they have already been established in related markets. You wonder where to get all the information from? The solution is simple: Website information, media articles, or user conversations will bring insights. Copying and borrowing (i.e., inspiring) may sound fun and games. However, the key is to be still unique enough to be better than benchmark businesses for at least a couple of customers or users.

Choose Your Business Model Wisely, and the Rest Will Follow (Value Proposition and Value Creation)

McDonald and Eisenhardt (2020) further emphasize that committing to a business model at an early point in time is crucial. This commitment should not occur arbitrarily but should be based on testing certain assumptions, such as who your customers or users are and where to find this target group. The results will considerably limit the number of business model possibilities. Why does it work? Testing uncertain conditions allows learning about the new environment as quickly as possible by facilitating access to market and stakeholder preferences. This procedure will give you a sophisticated idea of the composition of activities and value proposition. In other words, experimenting with your product's value proposition and prospect target market uncovers real intentions or even a mismatch.

Either way, the most suitable business model (template) comes into play. As you commit to a specific business model, you save valuable time on testing alternative models. By keeping the organizational structures (i.e., value creation) loose (like creating a prototype), you remain flexible enough to quickly incorporate learnings. In practice, this works as follows: Start with the essential elements of activities necessary to reflect the intended value proposition. New requests by early adopters or unforeseen consumers pave the way toward additional activity elements that will arise one by one. The aim is to discover how resources such as people, processes, and products optimally interact. This approach avoids tailoring the business model to a supposedly mistaken target group or getting caught up in optimizing aspects of the business model that will create less value as the market develops (McDonald & Eisenhardt, 2020).

Where Product Meets Market (Value Delivery)

At the outset, the bad news is that there is no formula for success in getting your product to market. The good news, however, is that you can use your entrepreneurial agility and customer proximity to your advantage. Keep the relationships with your first customers close because these relationships will provide you with external knowledge on how and where to reach a bigger audience. In concrete terms, this means being present where your target group is and expanding the level of awareness of your business successively. Yet one of the findings of Yli-Renko and Janakiraman's (2008) study on young technology-based firms shows that attracting more customers or users is not inherently preferable because having customers means effort, cultivating relationships, and thoughtfulness. Therefore, as soon as the customer base grows, capacities require expansion, for instance, by specialized employees or systems.

Select the right distribution partners with care as well. Possible criteria can be conformity with company values, costs, quantity, and, of course, appropriateness for the product. The latter will also define the point-of-sale structure. Although complex products with a high need for explanation require in-depth, direct communication, simple-tailored products allow placements through intermediaries. Be prepared for the fact that you will probably have to take sales activities into your own hands at the beginning, perhaps with the community's help, until larger providers become aware of you. However, the detailed decisions about market entry, positioning, and sales tactics are more of a strategic nature than a question of the business model (Teece, 2010).

Money, Money, Money (Value Capture)

All the groundwork of elaborating, validating, and structuring your business model should pay off in the most literal sense of the word. Covering production costs and achieving high profits through a business model is simple math: Either the offer appeals to many customers or users or comes at a high price. However, as previously mentioned, it is unlikely that you will address a large customer base if the business is still under development. In addition, a high-price strategy should mirror the product's or service's high quality. Thus, it would be best to have an adequate revenue model to generate monetary returns from your business model. The decision for a revenue model involves questions such as the following: How is the product offering structured—can activities be consumed separately, or do they complement each other? How can the proposed value be demonstrated to the customer and encourage purchase? Is the transaction upstream of the consumption or vice versa? What are the customers or end users willing to pay for the offer? Roughly speaking, revenue models differ based on the timing and frequency at which customers or users pay for a particular offer. Let's take a further look at these models:

- ***One-time payment:*** The customer or user owns the product or takes advantage of a service only after having paid for it once. The payment usually takes place before offer usage. Thus, the full performance can only be guessed before purchase because this only becomes apparent after purchase through actual use. Examples of revenue models are paid (online or offline) and advertising.
- ***Reoccurring or long-term payment**:* The customer or user only receives (permanent) access to a product or service if they pay for it regularly. Typical models are subscriptions, commissions, and rentals.
- ***Modular payment:*** The customer or user has access to a free, readily available option that can be separated from the actual (full) value-creating option, which must be paid for. The payment occurs irregularly and depends on preferences and use-case. A prominent example is the freemium revenue model.

Interestingly, the revenue models of different players can differ even within the same product range (Tidhar & Eisenhardt, 2020). We must admit that this does not exactly make the decision for a model easier. But what does research say about the optimal choice of a revenue model?

In his quantitative study on freemium models of online games, Rietveld (2018) shows that the choice of revenue model influences how consumers perceive the value of a particular offer. Although the core offer of the business remained the same, businesses obtained less revenue through the freemium model compared with the paid model. This result could be because consumers associate cheaper offers with lower value, hence utilizing them less often and making an upsell transaction unlikely. However, the offer's variety, quality, marketing, and underlying costs enable freemium models to be competitive as well. Additionally, product complexity is a relevant factor in whether a freemium model fits. The idea is to split the complexity of the product so that customers or users can engage with the free base version at a low threshold. Still, the monetary, application-based full version creates enough value to make the payment (Tidhar & Eisenhardt, 2020).

Tidhar and Eisenhardt (2020) further study the performance of the revenue models paid and advertising. When customers or users can assess the value of a product before purchase, then a paid revenue model fits. In other words, the effort, quality, and services put into the value creation and delivery processes must be signaled to prospective customers or users. Based on their results, the authors also introduce the third-party revenue model. Although users access the actual offer for free, they "pay" with their data, or so-called user resources. These resources are valuable for a paying third party that, thus, represents the actual customer of the business model.

Of course, many other revenue models might be suitable for your case. For example, depending on the industry you are operating in, patents or owning property rights (i.e., licensing) represent special value-capturing models. Ultimately, the revenue model should complement the business model's value proposition and value creation.

How Far Will the Business Model Take You?

Given your professional goals, you most likely strive for the growth of your business. Whereas the basic understanding of growth is that business revenue increases, growth can take different forms and speeds. Even if your venture does not seem profitable at first, you will undoubtedly gain knowledge over time, and your resource endowment will most likely develop. More precisely, growth arises from and creates space for new organizational functions, resources, knowledge, markets, and products. As the business changes, so does the environment in which it operates and vice versa. Accordingly, different paths emerge as the business model and its environment evolve. Less intense triggers for reconsidering the current business model might involve shifting consumer preferences within the market. In this case, you do not necessarily need to rebuild the business model from scratch. Instead, you can adjust those levers that maintain the fit between the business model and consumer needs (Sternad & Mödritscher, 2022).

In contrast, disruptive events creating opportunities and/or emerging from distress can trigger the transformation of entire business models as the entrepreneurial intention changes. Sternad and Mödritscher (2022) refer to the so-called "entrepreneurial leaps" when analyzing the reconfiguration of business model elements to exploit new markets. Entrepreneurial leaps entail innovating precisely those business model elements that are necessary to address a new market segment. The authors further provide details about the types of business model innovation processes depending on where, when, and how the changes in the business model occur. This shows that there is no one-size-fits-all approach to business model innovation because capabilities and strategies differ from business to business.

One thing is for sure: Being an entrepreneur will never be boring. Even if your business model taps into a new market, staying competitive and attractive in that market is still an ongoing task. However, there is support on your side because you can always rely on configuring your business model based on its four building blocks. With this in mind, you will reach a tipping point with your business model sooner or later, then having to ask yourself, what's next?

Three Things to Do Right Now

1. Take a closer look at your prototype and answer the following questions: Which market segment do you assume you should target? What activities need to be executed to generate the final product/service? What resources do you need to do so? Where do the resources and competencies come from? Who are possible partners? How do customers get access to the product/service? Look for a business model canvas template online and simply fill it out to gain an initial understanding.
2. Create different business model scenarios: How would your business work in a subscription, freemium, and other settings? Which hurdles and opportunities would you face in each case? Playing various mind games and experimenting with options will help uncover inconsistencies and refine the product–business model fit.
3. Getting things rolling: Reach out to potential partners step by step, present your project, and start with small orders, agreements, and contracts. You will quickly notice how new contacts arise, and links between various business functions emerge.

Further Down the Rabbit Hole

- Gassmann, O., Frankenberger, K., & Choudury, M. (2020). *The business model navigator: 55+ models that will revolutionize your business*. Pearson.

In this book, Gassmann and his co-authors navigate the often nontransparent jungle of business models. They reveal the intentions of the big players and share some lessons for aspiring entrepreneurs.

- Lüdeke-Freund, F., Breuer, H., & Massa, L. (2022). *Sustainable business model design: 45 patterns*. Zarbock.

The book provides practical insights into 45 business model patterns. It assists with frameworks for businesses that are seeking to align profit-ability with sustainability, making it a valuable resource for those looking to anchor within the landscape of sustainable entrepreneurship.

- Osterwalder, A., & Pigneur, Y. (2010). *Business model generation: A handbook for visionaries, game changers, and challengers*. John Wiley & Sons.

A true classic in its domain: The inventors of the business model canvas make it easy to get started in the business model maze and provide the most essential instruments.

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Pitch Perfect: Impressing Your Audience As an Entrepreneur

In this chapter, you will learn …

… what a pitch is, and what it contains,
… how you can practice pitching and prepare yourself for the stage,
… how audience awareness helps you to make the most out of your pitch,
… how to deliver information, create curiosity, and be memorable, and
… how to cut a good figure when answering investors' questions.

What a Pitch Is—The Peculiarities of Convincing an Audience

Another milestone along your entrepreneurial journey is pitching your venture to others. A pitch is "a talk or arguments used by a person trying to sell something or persuade people to do something" (Oxford Learner's Dictionaries, 2023a, b). In other words, you "try to persuade somebody to buy something, to give you something or to make a business deal with you" (Oxford Learner's Dictionaries, 2023a, b). If you pitch your venture, you are "selling" it to different audiences. Researchers have found

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that pitching is a mechanism to deliver information about a venture and its agents (Fisher et al., 2017) so that the addressed audience starts to embrace them. For the first time, you try to convince somebody about your venture.

You may realize that pitching differentiates from your previous validation talks and customer exploration interviews. When you validate your idea and solution by approaching potential customers, remember that your primary goal should be to acquire as much information as possible. You learned how important customer feedback is in developing your solution and prototype. Therefore, you try to instrumentalize your stakeholders' knowledge to refine your solution instead of convincing them of yours. When you pitch your venture to a target audience, your primary goal is to turn them into spokespeople for you and your start-up.

Pitching is not a singular event; it is likely that you will pitch something in front of someone again and again. Do not hesitate to equip yourself with the methods and tools necessary to deliver a great pitch. Suppose you followed each chapter's assignments and suggestions. In this case, you have come a long way already and will soon stand before others to convince them of your start-up. Your pitch is your venture in a nutshell. Toward the end of this chapter, you will see that a pitch contains more than your start-up presentation and that it summarizes the major and minor aspects of your entrepreneurial endeavor. As an entrepreneur, you have to understand your venture in and out. Who are your customers and why? Which problem will you solve for them, and what are the boundaries of your solution? How does your business model work, and which key performance indicators (KPIs) do you focus on? These are just a few examples of questions your stakeholders seek answers to. So before you pitch in front of an audience, make sure to really know and understand what you are talking about. If you have skimmed through the book, however, you might want to return to this chapter after thoroughly exploring your start-up.

Preparation Is More Than Half the Battle—The Effortlessness of Pitching to Anyone at Any Time

Unfortunately, we regularly encounter a distorted image of pitching when we talk to aspiring entrepreneurs and attend start-up events (such events often contain a pitching session). It somewhat shocks us how many founders fear pitching their projects on an open stage. The spectrum of reasons ranges from false expectations of both the audience and those who pitch to the fear of failure, fear of revealing too much about their venture, and the widespread fear of public speaking. Although we cannot cure all these fears, we can help you deal with them. In this chapter, we share some ideas on how you can best prepare to not even waste a thought about being afraid of pitching—and about the audience.

Speaking in public is one of the biggest fears most people have. It is no surprise that we encounter it among aspiring entrepreneurs as well. Why is that? It is not easy to enter the stage for the first time. You leave your comfort zone to do something new. The pitch is new, and you speak in front of an audience—so it scares you twice. Remember that you are not as much of a rookie as you may think. Oppositely, you most likely pitched before—you were just unaware of it and may have known the audience. Take a step back and change your perspective. Instead of your venture, think about your life. We are sure you have pitched many times in your life. You may not have called it a pitch. Still, you have attempted to persuade someone to do something for you. What was your best pitch? To convince your parents to buy you some candies at the cashier of a grocery store? Negotiating your grade to a better end? To deliver arguments to your friends to eat dinner at the restaurant you wanted to go to so badly?

Pitching is like most things in life: The more you repeat it, the better you get. Researchers of many disciplines study the effects of repetition and learning on task performance. Unsurprisingly, there is a positive correlation between practice and task performance (Hausknecht et al., 2007). You may have been to a pitching event and witnessed how seemingly effortless a founder steps on the stage, grabs the microphone, and nails a pitch on the dot. Spontaneous. Fearless. Effortless. Really effortless? Read carefully. It is *seemingly* effortless.

You do not know how much work has been directed into this pitch and how much practice it took to make everything seem effortless, perfectly timed, and straightforward. How often did the founder refine the pitch, either in front of an audience or alone? The best pitches look like something difficult was made easy. A great pitch is the result of exceeding practice. Start-up evangelist Guy Kawasaki claims it "takes about 25 times giving the pitch until you're really smooth with it" (Chipman, 2016, n.p.). Twenty-five times—if you pitch weekly, that is half a year. It is the art of making complex tasks look easy (Italians refer to it as *sprezzatura*, referencing Baldassare Castiglione in his book "The Book of the Courtier" from the sixteenth century (Castiglione, 2003)). So become an artist instead of ducking away from pitching.

We most certainly cannot cure the fear of public speaking. However, we can help you prepare yourself to level up your pitch so that you feel ready to deliver to anyone at any time. Let us draw the analogy to a soccer pitch (in the sense of a soccer field): Remember that the best players practice a lot. Practice is probably the reason why some players score penalties seemingly effortlessly. Yet the effortlessness results from exceeding practice: The tension in front of thousands of fans, the psychological duel with the goalkeeper, and the awareness of the potential consequences of the goal (or not scoring it)—what looks easy has been practiced repeatedly. The player studied the opponent intensely for the eventual likelihood of such an event. In a similar vein, you will prepare your pitch. Once the time comes, you will be ready—with the advantage of knowing the exact timing and, ideally, the audience you aim to persuade.

Know Your Audience—Not Every Pitch Addresses a Similar Target Group

No matter to whom you pitch, clarify two things beforehand. First, know what you want, in other words, your goal and why you pitch. Second, know the other party, that is, your audience. What do they want, and how can you stimulate their need? If you know what they expect from you, you can meet or outperform these expectations. There are multiple audiences an entrepreneur can target. The "someone" in the pitch definition is the person you want to persuade.

Most founders whom we meet equally understand pitching with raising money from investors. Raising money from investors is a process in which you may convince financiers early on with a pitch. We understand this prioritization. Start-ups face resource constraints, and liquidity is essential to survive. Therefore, this concern dominates the needs and thoughts of entrepreneurs. However, there are more audiences you should consider, and investors represent only one of them. Take your team, for instance. Did every one of you burn for the project from the start, or have you argued for venturing together instead of pursuing an alternative? Entrepreneurs must address various audiences along the journey (Fisher et al., 2017). When you grow the team, you might pitch the entire venture to a potential employee to persuade the person to hire with your start-up. When you build the prototype, you might persuade your neighbor to borrow some tools and equipment or even his whole garage. When you meet investors, you might convince them to trust you with their money to multiply it. Let us look at the two audiences you will confront sooner or later.

Investors, first and foremost, seek a return on investment. They invest their or other people's money into investment alternatives promising a return. The higher the uncertainty, the higher their expected return. Start-ups come with increased uncertainty. Therefore, investors expect a potentially high return. Hence, they look for signals that decrease uncertainty and promise a return on their investment. How do you transmit such signals? Demonstrate a realistic business case with a clear strategy to capture a sufficiently large market share to generate revenues and yield a return on investment.

When pitching to customers, the audience's expectations change. Potential customers will be more interested in the problem (they have) and how you solve it (make their lives better). They want to know when your product is available and the costs they face when purchasing it. Emphasize what they want to hear. Their expectations differ from those of investors. This is another reason you do not need to fear a large crowd. The more people listen to your pitch, the greater your marketing reach. A pitch is an opportunity to raise awareness about your venture. Embrace large audiences. Remember to define your goal before you pitch. Do you aim to impress the audience? Tailor your pitch accordingly.

What a Pitch Contains—Your Venture in a Nutshell

When Elon Musk introduced the Tesla Cybertruck to the public in 2019, the Tesla team aimed to demonstrate its car's robustness by throwing a metal ball at its windows. Instead of withstanding this test, the window splintered. Was this a material error? Or is it a genius idea to stay memorable and be sticky? Who would intentionally destroy a new car when introducing it? Exactly, Tesla. Although the window broke, it did not shatter into pieces like most car windows would, thus leaving the audience astonished. More importantly, the pitch captured media attention (Bloomberg Technology, 2019), and people still reference it (like we do just now)—a fantastic pitch. The performance on stage, the visually splintered window, and Elon Musk's remark that the window at least did not shatter into pieces stayed memorable, even years after. We think that Fig. 1 helps to explain such an effect.

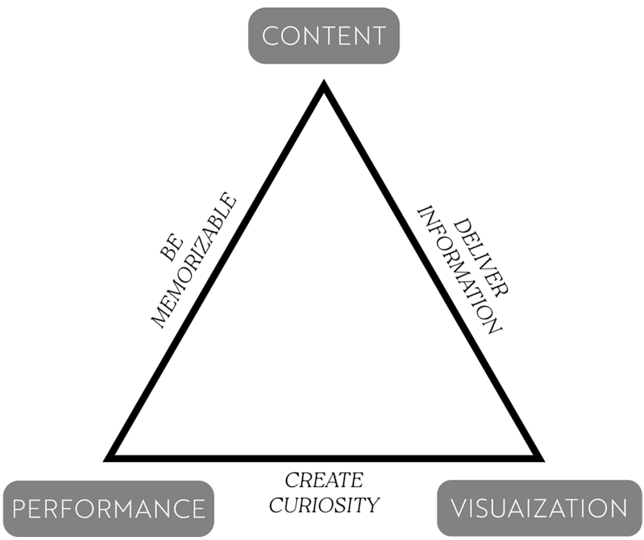

Fig. 1 The balance of content, performance, and visualization support the core functions of a pitch: to create curiosity, deliver information, and stay in memory. Authors' own figure

Visualization—Less Is More

The technical equipment blacked out when we hosted a grand finale of a start-up incubation program, just in between pitches. Being the host, this was the worst incident at the worst time. Adopting effectual logic (which you know from the beginning of this book), we continued the pitches without technical support. Surprisingly, this was the best that could have happened to us and taught us a lasting lesson. Those teams that understood their venture—and, thus, their pitch—thrived without slides. Somehow, it almost felt like a liberation and a relief for some teams that delivered great pitches. However, those teams who struggled to pitch without the security of slides not only failed to pitch their venture but also to understand the problem and the solution to it. If you know what you are doing, you can explain it to anyone at any time. The lesson we learned and have implemented since is simple: No more visualization in the pitch unless it is a product prototype.

Of course, the decision of how you visualize your pitch remains yours. Yet be aware of the following rules of thumb. We either watch and listen or read. It is surprisingly difficult to follow a presentation once your brain processes a lot of written text simultaneously. Researchers call this the split-attention effect because more stimuli compete for the cognitive processing power of the brain (Mayer & Moreno, 1998). Think about the stimuli the audience receives at a time and remember that they do not know your venture inside out. Most information you will provide is novel to them. Therefore, minimal information on the slides is clearly beneficial. You will learn to be clear and concise because you memorize the essentials instead of preaching down a spreadsheet. You can go into all the details after the pitch. You can share numbers, additional information, founder CVs, and any information once you accomplish waking your audience's interest. People remember stories, not facts.

Table 1 Four adjustments to shape how you appeal to the audience

Body language	Body language mirrors feelings and behaviors. Where do you stand? In the center or the corner? What about your hands? Do you move or stand still? Do you smile or are you serious?
Voice	Train your voice in the pitch. It is not just about what you say but how you say it: the speed, the tone, the breaks. Prepare what you want to emphasize, make a point by raising your voice, or give the audience time to process a powerful message by holding in for some seconds.
Clothes	Clothes make the man. Be groomed, and show that you take the whole occasion seriously. You do not go to a fashion event. Yet you might want to think about the message your clothes transmit. A suit with a tie may or may not work just as much as a college hoody. For example, billionaire Peter Thiel writes in his book that he never invests in a tech CEO wearing a suit (Masters & Thiel, 2014). For others, you may look sloppy coming with a college hoody. Dress to the occasion and feel comfortable.
Words	Words activate feelings and carry your message. Choose them wisely. Steve Jobs's "One More Thing" became iconic for Apple's product launches. A well-prepared pitch consists of consciously chosen words without sounding like a poem that has been memorized and recited.

Table compiled by the authors

Performance—Impress the Audience

There is not too much generic advice on how to perform a pitch. Each person is different, and a pitch is not a stage play. Entrepreneurs solve problems; they are not actors. Be yourself. Yet we have some aspects to think about when preparing a pitch.

Most importantly, keep in mind that you appeal to others. Whatever you do, there is a chance that you will leave a lasting impression on your audience. Every action transmits a message. Table 1 collates four adjustments to stage your performance: your body language, your voice, your clothes, and your words.

Content—People Remember Stories, Not Facts

The content is the central aspect of pitching. Performance and visualization are tools to be memorable, distinguish the pitch from others, and help keep the necessary clarity. Yet the content delivers all the information about the venture. As you have just learned, the content and the focus on some aspects are audience specific. We orient the content on the pitch in front of potential investors.

Sequoia Capital, a leading global venture capital firm, recommends 10 points in its pitch guide (Team Sequia, n.d.). Of course, these points are a guideline and not a blueprint. The optimal distinctiveness can be somewhere close but not too close to it. When you read through it, you will find the aspects that are familiar to the chapters in the book. Indeed, the order is the thread of your venture story. The pitch contains your venture in a nutshell. It covers the essentials of what you do, for whom you do it, why, and with whom. The story is the binding element between all of the

Table 2 The investor pitch content: Tell a clear and coherent story that includes the essentials of your venture

Element	Key aspects
Company purpose	Summarize your business in one sentence. What do you do? Take your time to find the purpose in one sentence. Think about the core element of your value proposition and translate it into the most straightforward line.
Problem	Explain the problem your venture tackles—and who has it. Describe it by reflecting on the outcome of your customer exploration. Explain it simply without introducing too many subproblems. Remember that the audience might not know about the problem you have been working on. Deliver sufficient context where you want to leverage your solution.
Solution	Your solution changes the world—at least for the problem owners. The solution is the value you deliver to customers. State your value proposition. The solution solves the problem you introduced for your target customer. Here, you can be more specific. Still remember that you need to catch the audience with your story. You can explain in more detail afterward. The solution changes the status quo. Use verbs to describe how it does so.

(*continued*)

Table 2 (continued)

Element	Key aspects
Product/ Prototype	Demonstrate how your product works! Show your product or the current development state of your prototype. Here is a rule of thumb: Listening < Audio-visualization < Application. When you talk about your solution, there is a high chance that everybody has a different image in mind. Showing your solution reduces this. Demonstrating your prototype, however, levels the imagination of the audience. Demonstrate as much as you can instead of solely talking about it.
Timing—Why now?	Why is now the right time for your solution? Researchers speak about external enablement of new venture creation (Davidsson et al., 2022), meaning any meaningful change in the business environment. Such enablers are, for example, changes in technology or society. A pitch is convincing when it includes which external forces benefit the venture. Great start-ups failed because the market was not ready for their technology.
Market Size	Show the customer segment and market size. Include the market potential in the upcoming years. Estimate your market potential. A top-down or bottom-up approach is easy to follow. Top-down: Start from the total available market, which share is your serviceable available market, showing which share you will capture. Bottom-up: Start from the niche you will penetrate, showing how you gradually expand the market share. Be aware of your numbers. We often see entrepreneurs who show fantasy numbers. Unrealistically, large numbers are just as off-putting as intriguingly small numbers.
Business Model	Explain how you commercialize your product. You have introduced your potential market share—How do you make money? The business model is complex. Keep the pitch simple and demonstrate how much revenue you will generate from each customer. The costs are essential. Yet keep them for your discussion and financials later. Show your plan for revenue and, subsequently, profit.
Competition	Show with whom and for what you are competing. There is some competition. Show that you are aware of that. "We have no competitors as we are so innovative." In a bingo game on pitch events, this statement would be an almost certain point, without mentioning competition. We wonder, if there is no competition, is there a need? Every start-up has some kind of competition. You have not looked from the proper perspective if you do not have competition.

(*continued*)

Table 2 (continued)

Element	Key aspects
Team	The biggest asset of your venture is the team. Show the necessary skills you bundle to succeed against the competition and realize the story you tell. The team slide captures the most attention from investors (Eisenmann, 2015).
Traction/ milestones	Traction increases your credibility. It creates trust in your team to do the job. Show what you have achieved and the next steps. You can include your vision here. Show where you come from, where you are now, and your vision for the future.
Financials	Financials are essential for investors. Likely, they will spend a lot of time on your financial forecast to evaluate the economics of an investment. Remember that investors look for a way to multiply their money by yielding high returns. A start-up competes against investment opportunities such as stock, real estate, commodities, and other risky investments. The potential return is promising.
Call to action	Toward the end of a pitch, we often miss a clear call to action. You learned about the audience diversity. What do you want from the audience? You offer something in exchange for something. Make an offer the audience cannot resist.
Back Ups/Q&A	Here is the space for all the details. Prepare the most common questions in advance. The pitch ends when you finish a discussion. Prepare your numbers, revenue and cost overview, unit economics, problem exploration, iterations and pivots throughout venturing, etc.

Table compiled by the authors

points you include. Elaborate on the problem and why your solution solves it for sufficiently enough people. A good pitch is a story that captures the audience and delivers just enough information. You are well advised to include the company's purpose, the problem you want to solve, your proposed solution, how you turn the solution into a product, why the right timing for that product is now, the growth potential of your target market, how you appear on the market and make money, who else is competing for this market, why you are the right people to win, and, of course, the financial outlook and what you expect. Table 2 summarizes what a pitch structure may look like in more detail.

Table 3 40 questions to crash-test your start-up—test how well you know your venture (Molfar, n.d.)

Category	Typical questions
Problem	• What problem are you solving? • What problem will be solved at the end of what you are doing? • What do we expect the result to be? • Can you state the problem clearly in two sentences? • Have you experienced the problem yourself? • Can you define this problem narrowly? • Who can you help first? • What can we address this immediately? • How do we get the first indication this thing is working? • Is the problem solvable?
Customer	• Who is your customer? • Who is the ideal first customer? • How will they know if your product has solved the problem? • How often (frequency) does your user have the problem? • Who is getting the most value out of your product? • How intense is the problem? • Are they willing to pay? • How easy is it for your customer to find your product? • Which customers should you run away from?
Product	• Does your product actually solve the problem? Be truthful, and why not? • Which customers should you go after first? • How do you find people who are using your "bad" first versions of your product? • Who are the most desperate customers, and how do you talk to them first? • Whose business is going to go out of business without using your product? • Are you discounting or starting with a super low price? Are you considering this approach? If so, why?

(*continued*)

Table 3 (continued)

Category	Typical questions
Performance	• What are you using to measure how users are interacting with your product? • What 5–10 metrics are you measuring to understand how your product functions? Why those metrics? • When you build a new product or feature, what is the metric that will improve because of that feature/product? • What number do you track to show how well your company is doing? • What is your top-level KPI (revenue, usage)? • What are the underlying metrics that contribute to achieving your top-level KPI (new users, retention of users, content created = > DAUs at Social Cam)? • Which of these metrics are you trying to move this development cycle?
Product development	• How long is your product dev cycle? What is causing it to be that long? • Who is writing down notes of your product dev meeting? • Which category does each of your brainstormed ideas fit: new features/interactions on existing ones, bug fixes/other maintenance, and A/B tests? • How easy/medium/hard are they to do? • How can you restate the hard ideas (disaggregate ideas into smaller ideas)? • What parts of hard ideas are useless or hard? Are there other options? • Which hard idea will improve at the KPI the most? Which are medium? Which are easy? • What is the spec for the product/feature we want to build?

Table compiled by the authors

The Power of Answering Questions—For Investors and Yourself

Once your audience is hooked, they want to know more about the topics you presented. The pitch does not start and end with the presentation. It begins with thorough preparations and ideally ends with an in-depth exploration of your venture. So expect tough questioning. Table 3 collates some standard questions the pitch audience might have and could ask.

In our experience, there is a common misconception between founders and investors. Usually, investors do not want to grill you to discover your weaknesses: They want to reduce the information asymmetry among an insider (the founders) and themselves to mitigate their investment risks and make an informed decision. Thus, it is about two questions: How well do you know your start-up, and how well can you communicate the knowledge? Very well, of course, because it is your venture. We challenge you to prove it. If you succeed—excellent. If not—you know the homework you have to do.

Remember the anecdote about our pitching event and the blacked-out technical equipment? The key message is that those teams that understood their venture thrived without slides. Preparing a pitch by answering those questions that investors frequently ask helps you ensure you know what you are doing and understand all aspects of your start-up. Preparing a pitch is, therefore, also a powerful internal tool. It will show which answers you can deliver instantly and which questions you still have a blank sheet of paper for. We recommend each founder answer the 40 questions from Y-Combinator in Table 3 before pitching their venture. Go ahead and give it a try.

When you start answering these questions, be honest with yourself. This is not a school test; lying about being prepared does not help anybody. Do not find excuses and workarounds if you are missing an answer. It is essential to find the blind spots in your concept. Embrace missing an answer as a hint to elaborate on precisely this aspect. These questions show you—and others—how well you know what you do. If you cannot answer them, who else can? It is an internal guideline on what you must catch up on and work more ambitiously to succeed. Pay attention to the answers. Write them down. Are the answers concise and sharp? Or do you meander around the core to hide a lack of knowledge? Being able to answer all of the questions is the first step. Take your time. Work on the strategies of your venture to answer those questions you have no answer to yet.

Next, work on delivering the information concisely and clearly. If you can express it simply, you understand it well, and the chances that others understand it increase. A pitch and the subsequent questions are mentally challenging. Imprecise answers distract. You want to show what you do, communicate it, and move on to the next question.

Moreover, you should be aware of the underlying motivation of every question you might be confronted with. How investors pose a question and the subsequent way to answer it significantly affects the funding amount (Kanze et al., 2018). Generally, there are two kinds of questions: promotion questions and prevention questions. Promotion questions are based on a generally positive attitude toward your venture and basically ask you how you plan to win. Prevention questions are a bit more reserved; essentially, the person asking you wants to know why you will not fail. Naturally, those who ask you how you will win are on your side, while those who worry you will fail and ask you about it are pretty skeptical.

Similarly, there are prevention-focused and promotion-focused answers (Table 4). Research shows that entrepreneurs who can identify the type of question and have a suitable answer can increase the amount of funding offered. In particular, it is critical to break the potentially vicious circle of prevention-focused questions, which can lead to prevention-focused

Table 4 Promotion and prevention questions

	Promotion-focused answers aim to maximize the venture	*Prevention-focused answers aim to avoid making any mistakes and avoid negatives*
	• We focus on gaining as much market share as possible • We aim to capture all opportunities	• We focus on not losing any customers • We aim to not miss out on any opportunity
Promotion questions • How do you intend to acquire customers? • How do you maximize gains?	• Respond to questions that aim to win by outlining how you will win	• Respond to questions that aim to win by outlining how not to lose
Prevention questions • How do you prevent customer retention? • How do you minimize losses?	• Respond to questions that aim to avoid defeat by outlining how you will win	• Respond to questions that aim to avoid defeat by outlining how not to lose

Turn prevention questions into promotion-focused answers (Kanze et al., 2018). Table compiled by the authors answers and more prevention-focused questions. Unfortunately, female entrepreneurs are confronted more often with prevention questions than their male counterparts. Luckily, this vicious circle can be broken.

The promotion-focused mindset subliminally indicates growth (Brockner et al., 2004). Instead of trying to prevent adverse events, a promotion focus actively seeks positives. Even if a prevention question tries to avert a pessimistic scenario, the promotion-focused answer brings about something positive. On the other hand, the prevention focus indicates a mindset seeking to avoid mistakes and being characterized by perfectionism. Although such a conscious work ethic is fair and square, investors would instead look for growth and resource acquisition. Thus, prevention-focused answers may subliminally trigger thoughts that seek to explain why a venture may fail instead of why it succeeds (Lanaj et al., 2012).

Hence, focusing on giving positive and promotion-focused answers avoids signals for loss and stagnation. It is not a feeling an investor wants to have when considering an already uncertain investment opportunity. Practice how to flip risks into growth potential without speaking in empty phrases or—worse—empty promises or default answers that suit any start-up. Spotting and differentiating promotion and prevention questions during the conversation with investors will be challenging. A pitch is mentally demanding, and you may be nervous. Moreover, your audience expects a prepared founder who does not need to think about each question for minutes. Their time is valuable, and so is yours. Be efficient and sharp. Therefore, preparing and formulating the promotion-focused answers beforehand is how you answer questions efficiently and effectively.

What a Pitch Should Not Deliver—Things to Be Aware Of

There are certainly some things to consider when pitching. One mistake we witness at almost every pitch event is content overload. Aspiring entrepreneurs who are burning for their venture tend to put everything into their pitch. How do you pack weeks of work into a couple of minutes? You do not have to. A good pitch is simple, straightforward, and easy to follow. It is unnecessary to tell the audience about every person that one approached to validate an idea. It is unnecessary to include each time a feature is adopted, a strategy changed, or every CV step of the founder team. A precondition to sharing more insights is to share a common understanding of what the venture does. Subsequently, the pitch that captures the attention will start a conversation that can go into detail. We showed you the importance of the questions after pitching. This is the right time to go into every detail with the audience. A good pitch contains as much information as necessary and enough not to confuse your audience.

Another dangerous aspect is overselling. The media and society tend to hype start-ups with high growth ambitions and valuations and treat these as at least questionable ideals (Kuckertz et al., 2023). Unfortunately, we still see a lot of entrepreneurs who oversell their ventures. Pitching is an impression management tool (Nagy et al., 2012), helping spread optimistic estimations and keeping you confident. Yet imagining fantasy numbers, unrealistic goals, and unhealthy ambition beyond good may jeopardize the venture and the team. As researchers, we value rigor and rely on trustworthy data; it is an essential ethic of our job. Similarly, it is also not in the interest of investors to further engage with a start-up that is untrustworthy from the start. Either such a start-up does not know its business (a red flag for any investor) or the facts are not convincing (another red flag). Therefore, overselling a pitch likely deters the venture instead of supporting it.

Finally—and truly important to us—we want to emphasize how to deal with criticism. You may wonder why we place the consequences of criticism in this section. Unfortunately, another lesson learned from years of attending and hosting pitch events is the potentially detrimental effects qualitative feedback can cause. Therefore, we encourage every entrepreneur not to stop venturing after receiving negative feedback. In Chapter "Demystifying Entrepreneurship: What It Is and What It Is Not," we elaborated on the insignificance of a single jury's availability to predict venture success. So do not take criticism or—even more so—opinion as indisputable wisdom. Those who judge your venture do so from their point of view. It should not address you personally but help you develop the venture in the right direction. Start-ups that receive venture capital can still fail, and those that receive less investor attention can still thrive in the long term (Smith & Viceisza, 2018). Hence, feedback may help develop the venture. At best, you listen, process, and make something out of it. The next stage is not far. Ideally, the exchange between the investors and the founders is on a level playing field. Do not flinch in front of your investors. A stable partnership depends on mutual respect. Not only do you need to impress the investors, but they also have to impress you. If you feel intimidated by them the whole time, you should reconsider a partnership. On average, start-ups approach over 20 investors to arrange a meeting (Eisenmann, 2015). Be patient and plan, and contact and talk to different investors before you rush things. If you do not align, it is ok. Just prepare for another pitch until you master the effortlessness of pitching to anyone at any time.

Three Things to Do Right Now

1) Write down three pitches you have already achieved. Who did you persuade to do what? When was the pitch? Did you have a core argument to convince the other?
2) Get into shape for pitching! Look around. Pick one object you see and take a minute to prepare a pitch. Pitch it to the next person you see. Avoid simply describing the object. Develop a story that ends with a call to action. Next, persuade somebody to do something. Define a goal (What do you want) and a target audience (From whom). Pitch consciously to convince the person to do what you want. Start with something you can pitch today! What movie will you watch in the evening? The place you go for dinner with friends? Remember: Do not enforce something or decide upon others. Convince them by arguments.
3) Prepare to pitch your venture. Check the 40 questions in Table 3 that a start-up founder should be able to answer after pitching the venture. The questions result from the famous Y-Combinator accelerator. Read each question and take notes. Do you have an answer to all of them?

If not, what do you need to work on? Working on the answer means planning and acting, not inventing a fantasy answer. Your answer shows where the venture stands and what you have to consider to succeed. Please write down the answers to all questions, and then, refine them to a sharp answer.

Further Down the Rabbit Hole

- Team Sequia. (n.d.). *Writing a business plan*. Accessed via https://articles.sequoiacap.com/writing-a-business-plan on April 5, 2024.

Sequoia Capital is a globally renowned and successful venture capital firm. Their recommendations result from years of experience, thousands of pitch decks they have received, and pitches they have witnessed. In their article, they elaborate on the clarity and conciseness of a great pitch, which consists of 10 points that suffice to convey the core message of your venture.

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Harvard Business School professor Tom Eisenmann and DocSend analyzed over 200 start-up pitch decks and shared the findings. Here, you will find analytics about the average time spent on slides, recommendations about the structure, and some answers to why we suggest the content we introduced in this chapter.

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Insights from Stanford offer 10 heuristics for nailing a start-up pitch, including the experience of venture capitalist and marketing expert Guy Kawasaki.

- Ralston, G. (2024). *A guide to seed fundraising*. Accessed via https://www.ycombinator.com/library/4A-a-guide-to-seed-fundraising on April 12, 2024.

Y-Combinator summarizes what you need to know when raising a seed investment round. Hands-on advice and guidelines are included. Read it when you consider raising money (which you likely will when reading your pitch preparations until here).

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Onwards and Upwards: Hacking Entrepreneurial Growth

In this chapter, you will learn …

… what growth hacking is,
… when you should start with growth hacking, and
… how to implement a growth hacking process in your start-up.

Growth Hacking: A Framework to Expand Your Customer Base and Increase Sales

Early on, start-ups focus on adequately defining the problem they work on, creating a solution for customers that have that problem, and developing a profitable business model around their solution. We have addressed many of the issues pertaining to these tasks in the previous chapters. The more start-ups mature, however, the more they begin to focus on growth. Focusing on growth means that they try to "scale" their solution in the market, and they scale their solution by selling their product to an increasing number of customers and/or selling more to the customers they already have. To account for this shift in focus, entrepreneurship scholars Saerom Lee and J. Daniel Kim from Wharton Business

A. Kuckertz et al., *Mastering Your Entrepreneurial Journey*,
https://doi.org/10.1007/978-3-031-71064-3_8

School suggest distinguishing two overarching phases: start-ups go through an early phase of experimentation and a subsequent phase of scaling (Lee & Kim, 2024). Figure 1 illustrates these two phases.

During the experimentation phase, most start-ups experience only slow to moderate growth. This is where start-ups quickly iterate through experiments to explore their problem, identify a market that resembles a valuable business opportunity, and develop a solution and business model that adequately satisfies the needs of their customers. A common way to organize this experimentation process is the lean start-up framework mentioned in the previous chapters of this book.

During the scaling phase, start-ups make the deliberate decision to accelerate their growth (often to a considerable degree). As a result,

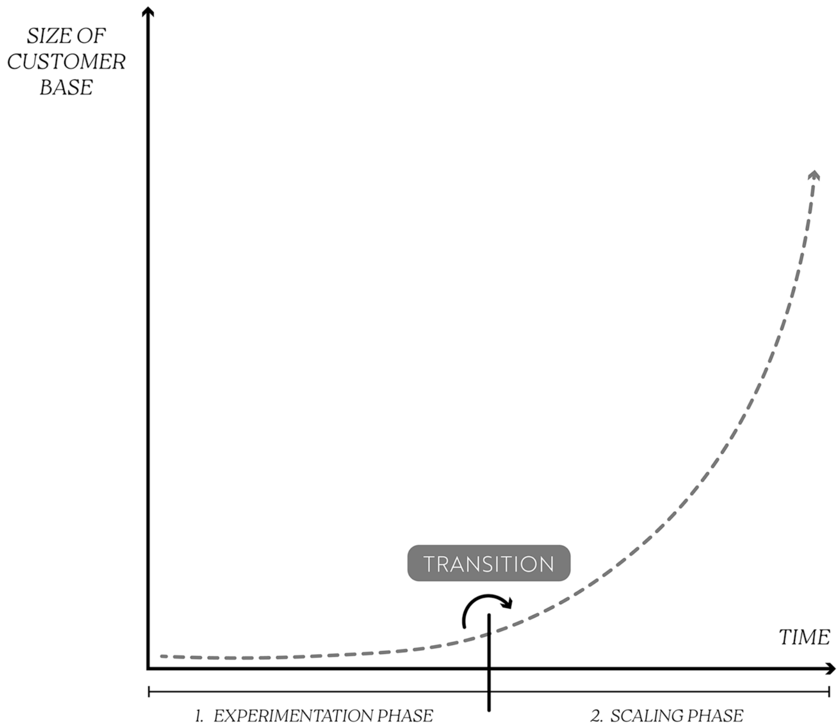

Fig. 1 Experimentation vs. scaling. Authors' own figure based on Lee and Kim (2024)

start-ups experience two types of growth: First, there is internal growth in terms of the company's resource pool. This means that start-ups hire additional employees, raise further capital, and extend their digital or physical infrastructure to serve the growing demand of their customers. Second, there is external growth in terms of the company's customer base. This means that start-ups engage in (marketing) activities to increase sales and the number of customers they serve.

Growth hacking does for the external growth part of the scaling phase what the lean start-up method does for the experimentation phase: It provides start-ups with a framework that specifies how to organize the process of generating external growth.

The term "hacking" does not imply the use of illicit activities in the sense of maliciously infiltrating computer systems. Instead, it encourages start-ups to adopt a creative, resourceful approach that uses innovative, often unconventional strategies (i.e., clever hacks) to acquire new customers, activate current customers to use the product more intensely, increase customer retention, and improve monetization.

For instance, a common technique for smartphone apps is the love hack. App providers have noticed that, when the last three to four reviews of their app are very positive, download numbers tend to increase by a considerable degree. As a result, many app providers have started to actively manage reviews by asking customers who are likely to be delighted to write reviews of their apps. This is just one of many examples of hacks start-ups come up with when applying the growth hacking framework.

What does this framework look like? Sean Ellis and Morgan Brown, who helped build the growth engines of fast-growing multibillion-dollar companies such as Dropbox and Instagram, conceptualize it as being based on three core elements (Ellis & Brown, 2017): cross-functional collaboration, analysis of user behavior, and rapid testing.

- ***Cross-functional collaboration*** refers to the creation of cross-functional teams or the collaboration among teams from different departments (e.g., marketing, product development, and engineering) to break down traditional silos and combine complementary skills for a "one plus one equals three" effect.

- ***Analysis of user behavior*** describes the extensive use of qualitative research and quantitative analysis to generate insights into customer behavior and preferences that are grounded in data.
- ***Rapid testing*** refers to quickly testing ideas on how to expand a start-up's customer base or increase sales and the evaluation of tests with metrics that enable start-ups to act upon test results.

In the following pages, we explore critical issues related to this understanding of growth hacking, enabling you to better decide when you may need the framework and what to focus on once you get there.

Do Not Commit to Growth Hacking Before You Have Product/Market Fit

We want to start by issuing a word of caution: A premature focus on growth is a frequent reason why start-ups run into serious trouble. A study of the policy advisory firm Start-up Genome indicates why. In it, analysts of the firm collaborated with researchers from UC Berkley and Stanford University to investigate the life cycles of 3200 internet start-ups, concluding that 74% of those that failed did so because of premature scaling (Marmer et al., 2011). Further, they show that start-ups that scaled too early spent more money on acquiring new customers, were less likely to succeed in monetizing their users, and performed worse on several financial metrics, including firm capitalization.

The Start-up Genome study is no outlier. Venerated serial entrepreneurs, venture capital investors, and start-up mentors frequently talk about the dangers of accelerating growth too early and implore their protégés to focus on their customers and products first. This raises an important question: If you want to follow their advice, how can your start-up determine whether it is too early to scale or whether switching into growth hacking mode is just the right thing to do?

Ultimately, there is no one-size-fits-all solution that would apply to every company. Instead, you will have to weigh multiple factors that depend on the peculiarities of your start-up and the environment in which it operates. These factors may include the competition in your market, your ability to hire new talent, the availability of funding, and many other variables.

It is challenging to define generalizable guidelines on how to evaluate these factors. Widespread entrepreneurial wisdom, however, suggests at least one pattern that applies to almost any start-up: Scaling before you have or are at least close to product/market fit is a common way to disaster.

To better explain, allow us to reiterate our definition of product/market fit from the fourth chapter. Product/market fit consists of two elements: first, having identified a target market that is big enough (number of customers, market growth, and willingness to pay) to constitute a valuable business opportunity and, second, having developed a solution (product) that matches the needs of the customers in that target market and does so as good as or better than any of the competitors' solutions.

It is helpful to have product/market fit (with both its elements) before you grow because growing without it inflicts severe opportunity costs on your company. On the one hand, these costs originate from a loss of flexibility because of a ramped-up growth engine. Once you have expanded your customer base and established marketing, sales, and customer service organizations around your product, it will be challenging to continue market- and product-related experimentation. This will make it hard to correct the course (e.g., by pivoting to a new market segment or changing the functionality of your product), even when you need to.

On the other hand, these costs result from aggravating less-forgiving customers with a product that does not yet adequately match their needs. This may cause them to stop using your product and never return or, maybe worse, become vocal critics that deter other potential customers from giving your product a shot.

Opportunity costs are also the reason prestigious accelerator programs, such as Y-Combinator's start-up school in Silicon Valley, advise their start-ups to focus on building products people really love before they worry about growth. Sam Altman, former partner at Y-Combinator and current CEO of OpenAI, summarizes it as follows (Altman, 2023, para. 3):

> "[…] focusing too heavily on growth before you've built something people love leads to the leaky bucket problem. You can get users to come in the door, but they don't stay, and likely won't return."

Please note that this does not mean you should avoid growth at all costs while searching for product/market fit. Often, start-ups will grow inevitably if they gradually improve their market understanding and adjust their product accordingly. In fact, we even advise start-ups to get customers to use their product early and grow their customer base (at least to a certain degree) so that they can generate feedback that supports their decision-making.

However, there is a difference between getting customers to use your product to aid your search for product/market fit versus growing to achieve scale, increase market share, and exploit a business opportunity. Our advice is not to prevent growth from happening but to ensure that you keep the size and growth of your customer base at a manageable level so that you can still focus on building a product the customers really want. Even without having to worry about the various pains of a growing company, this will be a difficult enough task by itself.

Start with a Growth Equation to Align Your Activities with the Goal to Grow

Once you have product/market fit and decide to switch into growth hacking mode, you need to align the activities of your start-up with your goal to grow. How can you achieve this? A glimpse into the management literature provides helpful guidance.

Management scholars and executives propagate the identification and measurement of meaningful metrics as one of the best tools to align a company's activities with its goals. They have been doing so for a long time. "What you measure is what you get" is the often-quoted mantra, which Robert S. Caplan and his co-author, David Norton, popularized as early as 1992 in their article on using balanced scorecards to drive business performance (Kaplan & Norton, 1992).

The general idea of balanced scorecards as a strategic management tool is to translate a company's strategy into objectively measurable goals, determine performance indicators for each goal, and organize the activities of the company around improving the respective performance indicators. This helps companies objectively assess their current goal-related level of performance, provide strategic clarity on what their employees need to focus on day-to-day, and foster continuous improvement through data-driven decision-making.

Although the balanced scorecard is a formidable tool for mature organizations, we advise start-ups to keep things simple. This means that you should refrain from defining an overly elaborate performance measurement system. Instead, focus on the most critical levers that can make your start-up grow.

Andy Johns, who worked on growth for several successful companies, including Facebook, Twitter, Quora, and Wealthfront, suggests identifying a company's growth levers by formulating a growth equation (Johns, 2015). This growth equation serves as a simplified model of how the company grows to reveal the areas start-ups can tweak to influence their growth rate.

In his article, he demonstrates that such a simplified model can help to illuminate even complex businesses by formulating a growth equation for the online retailing division of Amazon. The growth equation looks as follows:

RETAIL REVENUE GROWTH = EXPANSION ACROSS VERTICALS X PRODUCT INVENTORY PER VERTICAL X TRAFFIC PER PRODUCT PAGE X CONVERSION TO PURCHASE X AVERAGE PURCHASE VALUE X REPEAT PURCHASE BEHAVIOR

The left side of the equation contains the key metric of how the company measures growth. This key metric serves as a guiding North Star for its growth initiatives. Consider the example of Amazon. Its North Star is retail revenue growth. According to their model, growth initiatives should ultimately generate additional retail revenue. The right side of the equation consists of the most essential growth levers that determine how much the key metric grows. For Amazon, the equation includes six growth levers that enable the company to systematically identify activities that increase retail revenue growth (Table 1).

The Amazon example showcases how growth equations help align a company's activities with its goal to grow. The growth activities impact the growth levers. Changes in the growth levers impact the North Star metric, which reflects the company's growth.

Another way to think about this is to view your start-up as a sailing ship. The North Star metric on the left side of the equation reflects your ship's velocity toward the desired destination. The growth levers on the right side of the equation relate to the ship's attributes that determine its velocity (e.g., the size of the sails or the ship's weight). Finally, the growth activities you engage in relate to changing the attributes of your ship that impact its velocity (e.g., reducing the ship's weight by dropping cargo).

You can formulate growth equations for any company or product. When you create one for your start-up, we encourage you to keep the following three principles in mind:

- ***Simplification is vital***: It is not your goal to create a mathematically correct and conceptually exhaustive growth model (we realize this can be hard to accept as we tend to be a bit nerdy about mathematical equations ourselves). Growth equations are helpful because they

Table 1 Growth levers of Amazon's retailing division and related activities (Johns, 2015)

North star	← Growth lever	← Exemplary growth activity
Retail revenue growth	• Expansion across verticals • Product inventory per vertical • Traffic per product page • Conversion to purchase • Average purchase value • Repeat purchase behavior	• Expanding from books to fashion, to electronics, etc. • Offering third parties to sell their products on Amazon • Search engine marketing with product pages as landing pages • Remove friction through one-click purchasing • Show recommendations of products before check-out • Free delivery for Amazon prime subscribing customers

Table compiled by the authors

provide a simplified representation of reality and thus illuminate how to make your start-up grow.

- ***North Star metrics vary***: Depending on the peculiarities of your start-up, your North Star metric may vary. Revenue, profit, and nonfinancial metrics are viable options. However, North Star metrics should reflect somehow that your customers receive value from your offer.
- ***Growth equations change:*** Both sides of the equation can change over time. Revise your growth equation regularly and update it if necessary. For instance, when you identify an additional growth lever, such as a significant new social media channel that drives your growth, you should include this channel in your equation to capture that change.

Implement a Process of Rapid Testing

After identifying your growth levers by defining your growth equation, the next step is to implement a process that allows you to quickly iterate through potential growth initiatives. We say "iterate" because, similar to what you have learned in previous chapters about problem exploration and solution development, testing ideas on how to grow your start-up should once again be done in iterative cycles. In their book *Growth Hacking*, Sean Ellis and Morgan Brown recommend organizing this process, as illustrated in Fig. 2 (Ellis & Brown, 2017). Each iteration consists of four steps: analyze, ideate, prioritize, and test.

In a nutshell, companies iterate through the process by analyzing the preferences and behavior of (potential) customers, coming up with ideas for growth initiatives, prioritizing which growth initiatives to engage in, and testing the initiatives to evaluate them. Next, they analyze the effect of deployed initiatives on growth, decide which ones to keep or double down on, and continue with an additional iteration.

To improve our understanding of the process, we will elaborate on how to proceed in each step using the fictional example of a food start-up called "Pirate Fruits." Pirate Fruits processes fresh, organically grown fruits and vegetables to produce tasty smoothies. All smoothies are sold via the company's website using a monthly subscription model. Customers who visit the website can first order a test package of smoothies at a

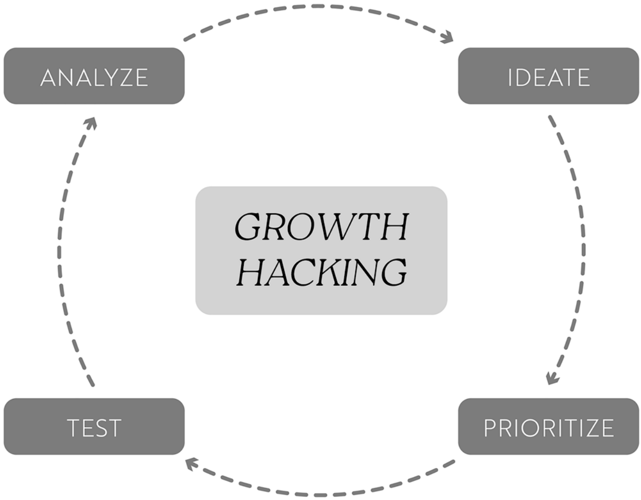

Fig. 2 The growth hacking process. Authors' own figure based on Ellis and Brown (2017)

reduced rate and then choose between two different subscription plans. After a year of carefully adjusting the recipes and subscription options according to customer feedback, Pirate Fruits appears to have found product/market fit and has managed to build up a preliminary customer base of 1800 active subscribers.

Let's assume we are the founders of Pirate Fruits and decide that it is time to switch into growth hacking mode (Arrr!). We have kicked things off by formulating our growth equation:

> MONTHLY SUBSCRIPTION REVENUE GROWTH = (SEARCH ENGINE WEBSITE TRAFFIC + SOCIAL MEDIA WEBSITE TRAFFIC + OTHER ADVERTISING WEBSITE TRAFFIC) X CONVERSION TO TEST PACKAGE X CONVERSION TO SUBSCRIBER X SUBSCRIPTION OPTION - CANCELLED SUBSCRIPTIONS + RESURRECTED SUBSCRIPTIONS

Next, we implement a growth hacking process that is based on a weekly growth meeting with our team.

(1) ***Analyze.*** In the first step, our goal is to further improve our understanding of customer behavior and preferences (or keep it up to date). To this end, we engage in two types of analyses. On the one hand, we constantly analyze data from our customer database using quantitative methods. We do so by dividing customers into different cohorts according to the criteria we deem as useful. These criteria may include subscribers versus nonsubscribers, type of subscription plan, subscription cancelers versus noncancelers, demographic variables, and more. Then, we compare different cohorts along the variables that help us better understand who these customers are, what they do, and what they like (e.g., which smoothies they prefer). When our customer database does not provide the data we need, we send out surveys to gather additional data. On the other hand, we qualitatively analyze verbal data to better understand the motivations of our customers. We acquire these data through open-ended questions in surveys (e.g., questions on why customers cancel their subscriptions) and customer interviews with people who are willing to talk to us. Here, we ask in-depth questions to get a better understanding of why customers engage in specific actions (e.g., switching to a different subscription plan). We distribute our learnings across the entire team by briefly summarizing our results from last week's analyses at the beginning of our weekly growth meeting, which should take roughly 15 min.

(2) ***Ideate.*** In the second step, our goal is to create a steady pipeline of ideas for initiatives that help us grow our subscription revenue. We collect ideas in a shared table calculation file. Every team member can contribute ideas whenever they want to. The ideas in our sheet are based on the results of the analysis in step one, the experience of team members, spontaneous inspiration, and best practices we have read about in growth hacking books or forums. The ideas are tailored to increase subscription revenue by impacting the respective growth levers in our growth equation. Each idea is listed with a short name, a description of how to test it, an assumption of how it will impact growth, and the metrics that need to be measured to evaluate it. For instance, one idea could be to offer active subscribers the chance to send a customized gift package with a Christmas smoothie to a friend.

The gift package could include a Christmas card with an integrated QR code that leads to a customized landing page on our website offering to buy a subscription at a special rate. Other ideas may suggest changing parts of the marketing copy on our website to encourage more visitors to try the test package of smoothies or choose a more expensive subscription plan.

(3) ***Prioritize.*** In the third step, we prioritize the growth initiatives on our list to determine which ones should be tested (first). We use three criteria to assess each idea: impact, confidence, and ease (ICE scoring). Impact refers to the potential impact on growth. Confidence describes the level of confidence that the idea will be effective in increasing growth. Finally, ease refers to how easy it is to implement the idea. Each of the criteria is scored with a value from one to five. The final score of each idea is the average of the three individual scores. The higher the score, the better the idea. The submitters of the ideas are the ones that score their ideas when submitting them to our growth initiative sheet. These scorings are not meant to be perfect but form the basis for a 25-minute discussion in our weekly growth meeting, during which we decide on two to three growth initiatives that we will test over the next 7 days. The growth initiative sheet of Pirate Fruits could look something like what is shown in Table 2.

(4) ***Test.*** In the fourth and final step, we delegate the responsibility for the growth initiatives we seek to deploy to a specific person. We determine who this person is in the last 20 min of our weekly growth meeting, during which we also discuss how to best implement the respective initiative. Over the next 7 days, the responsible person works with the rest of the team to test the growth initiatives, measure the results, and evaluate whether the initiatives are worth it. For instance, we may choose to deploy the "third subscription plan" idea from our growth initiative sheet. Often, even small changes in web pages that explain subscription plans lead to substantial differences in decision-making when customers shop online. A typical example is that offering three different subscription plans with cleverly designed benefits and costs often triggers customers to choose the mid-tier option.

Table 2 Fictional growth initiative sheet of Pirate Fruits

Name	Description	Assumption	Measures	I	C	E	Ø
Christmas gift boost	Allow subscribers to send one gift package to a friend. The package includes a card with a QR code. Track new customer acquisition with dedicated landing pages	Increases website traffic from advertising with gift packages and thus the number of new subscriptions	• Conversion to test package • Conversion to subscribers	4	4	1	3
Third subscription plan	Add a third, expensive subscription plan to encourage customers to purchase mid-tier subscriptions. Test with A/B tests	Increased number of customers that choose more expensive subscription plans	• Conversion to subscribers • Percentages of chosen subscription plans	3	4	5	4
…	…	…	…	…	…	…	…

Table compiled by the authors

After 7 days of testing, we continue with the next iteration. At the beginning of our next weekly growth meeting, we once again discuss new insights on customer behavior and preferences. However, we also speak about the current results of the growth initiatives that we deployed during the last 7 days. We decide to continue those initiatives with promising test results and adjust or abandon initiatives with less-promising results.

Obviously, the Pirate Fruits case is a simplified example that is meant to showcase how you can organize your growth hacking process. When you seek to implement the process at your own start-up, we encourage you to keep a few additional points in mind:

- ***Make it interdisciplinary.*** The team working on growth and participating in your regular growth meetings must be interdisciplinary. Do not only rally "marketing- and product management people." The generation and deployment of test ideas requires the combination of skills of marketers, product managers, engineers, data analysts, and (depending on the company) further roles. It is crucial to ensure that each of these roles is on board and actively works toward the same goal.
- ***Rapid testing is key.*** The idea behind implementing growth hacking, as described, is to achieve "high iteration velocity." This means that you implement a process that enables your start-up to quickly test a large number of growth initiatives. Think of growth as a numbers game with compounding wins. Launching several initiatives that lead to small gains every week will add up to substantial growth gains per year. Start with only one initiative per week and slowly increase the pace to as many tests per week as you can handle without compromising test quality.

Growth Hacking Across the Customer Life Cycle

Over the last couple of years, practitioners have constantly come up with new ways to hack growth. As a result, attempting an exhaustive enumeration and explanation of all available hacks in this continually evolving field is hard to achieve and would exceed the scope of this book. For this reason, we will instead conclude this chapter by providing you with a taxonomy of terms that are often used to refer to growth hacking techniques. Our idea is that you can use these terms to read up on the related techniques and decide whether you can apply them at your start-up or not. Figure 3 illustrates the taxonomy.

This taxonomy is based on research by Bohnsack and Liesner (2019), who have compiled a list of 34 growth hacking techniques. We slightly deviated from the original illustration of the taxonomy by assigning the methods to the phases of a simplified customer life cycle that consists of four stages: acquisition, activation, retention, and monetization.

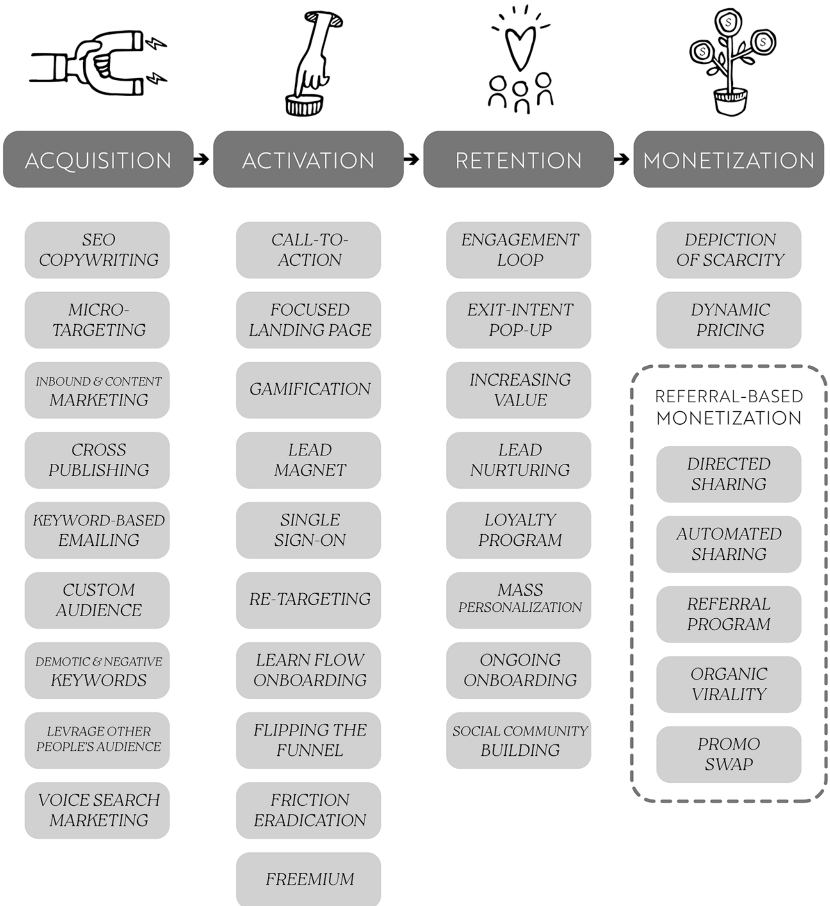

Fig. 3 The growth hacking taxonomy. Authors' own figure based on Bohnsack and Liesner (2019)

Acquisition hacks help start-ups acquire new customers, activation hacks help them increase the intensity with which their customers use their products, and retention hacks seek to increase the likelihood that customers will keep using the product in the long term. Finally, monetization hacks aim to expand the number of customers paying for the product (e.g., for freemium tools) and/or increase the average amount of money already paying customers spend on the product.

You will want to base your decision on whether a respective growth hacking technique is helpful for your start-up on data that are generated by testing the techniques instead of armchair theorizing. Often, a hack that works for one product does not work for another one. We encourage you to use the terms in our taxonomy to read up on what other start-ups may have tried in the past (a quick way to do this is to use your preferred artificial intelligence chatbot). Use this information as inspiration for growth initiatives that might work for your own start-up. Be creative when coming up with new ideas. Then, probe your ideas by quickly iterating through rigorous testing cycles while measuring their impact on growth.

Three Things to Do Right Now

1. Sit back in your chair. Close your eyes. Repeat the following sentence three times: "Before start-ups prioritize growth, they should search for product/market fit."
2. The "Further down the rabbit hole" section of this chapter includes a blog post by Rahul Vohra on how to measure and work toward product/market fit. Read the blog post and think about how you can implement his approach for your own start-up. For instance, business-to-business start-ups with a small customer base may have to rely more on qualitative customer interviews instead of the quantitative analysis of survey data.
3. Think of one digital and one physical product that you love to use. Formulate growth equations for the companies that offer these products. Try to keep it simple. Then, formulate a growth equation for your own start-up idea.

Further Down the Rabbit Hole

- Vohra, R. (2019). *How superhuman built an engine to find product market fit.* FirstRound. https://review.firstround.com/how-superhuman-built-an-engine-to-find-product-market-fit

In this blog post, Rahul Vora, CEO of the Silicon Valley company Superhuman, explains how he implemented a system to measure and work toward product/market fit.

- Ellis, S., & Brown, M. (2017). *Hacking growth. How today's fastest-growing companies drive breakout success.* Virgin Books.

This book provides a deep dive into growth hacking with hands-on advice on how to implement it as a process in your company.

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Building Bridges: Leveraging Your Network for Entrepreneurial Success

In this chapter, you will learn …

… about the importance of networks for entrepreneurs,
… how networks work, and
… how you can create synergies for you and your network.

The Value of a Network—The Difference Between Valuable Contacts and People You Just Know

Everybody talks about the importance of networks and networking, social networks, or social media networks. We have to talk about them, too. Networks are potent structures; some entrepreneurs even claim that networks are the most essential tools they have at their disposal. When we speak about social networks, we do not talk about social media networks in the sense of Meta, X, LinkedIn, and the like. Instead, we think about social networks more broadly. Social networks consist of people and the connections between them. Networks are essential because the connections between people allow for exercising influence or power.

A. Kuckertz et al., *Mastering Your Entrepreneurial Journey*,
https://doi.org/10.1007/978-3-031-71064-3_9

Most importantly, in the context of entrepreneurship, the connections between people facilitate the exchange of knowledge, information, and resources (Borgatti & Halgin, 2011). This exchange may lead to improved information access for the entrepreneur, better resource endowment, or higher levels of creativity. "This is not creativity born of genius; it is creativity as an import-export business [of knowledge and information]," says Burt (2004, p. 388), one of the most influential scientists in the field of social networks.

Different types of connections—such as knowing, trusting, exchanging information, advising, helping, or collaborating—give rise to different networks. Depending on the type of connection, you can be part of several networks. You can be part of a network where the connection is "knowing." Any two people in the network who are linked to each other know each other. This does not mean that everybody in the network knows everybody else: Person A knows Person B and Person B knows Person C. But Person C might not know Person A.

We encourage you to build effective networks to strengthen your venture (Birley, 1985). Of course, do not build networks for networks' sake. Networks are about giving and taking. Burt's notion of the import–export business highlights that networks only work when they provide value for everybody in the network.

Think back to the first two chapters of this book and recall one of the lessons you learned there: An entrepreneur brings together resources and creates an organization to pursue an opportunity (Bygrave & Hofer, 1992). Networks influence this process. The people you know and those you spend time with will affect your entrepreneurial journey. They support identifying opportunities. Research shows that entrepreneurship is a bit contagious. Individuals who spend a lot of time with other entrepreneurs are more likely to start a venture as well (Nanda & Sørensen, 2010). Additionally, entrepreneurs with deep embeddedness in networks run more successful ventures (Dahl & Sorenson, 2012) because these networks provide information and resources.

In the third chapter, we introduced you to the crazy quilt principle, which you can interpret as a principle of partnerships. These partnerships often start within networks of people who know and trust each other. Just think about yourself. To whom would you lend some of your precious time? To a person you know, value, and trust or to a stranger? You will likely select the person you know and value.

Your networks do not fall like manna from heaven. They grow. Growing takes time (Smith & Lohrke, 2008). It depends on many factors, such as your hobbies and the places you have visited, worked at, or lived in so far. The number of people you know probably also depends on your age. You continuously meet new people. Are all of those people a part of your network? In a way, they are. They are part of your network of brief acquaintances. Initially, you know little about them. You have no idea how you could help them and vice versa. But this can change. Your relationship with people can evolve from knowing to trusting and collaborating. It is not only about who you know but who is a valuable contact for you—and who you are a valuable contact for (Pollack et al., 2016).

Not only do networks grow slowly, but they are also rather persistent. For instance, the network of people you value and trust may still contain people you are not connected to anymore professionally. Networks are more resilient and more enduring than labor contacts and contracts. Your network may still contain social ties to colleagues who are "gone [from your professional environment] but not forgotten" (Agrawal et al., 2006).

The Functions of a Network—More Than Just Small Talk

We already learned about the importance of networks. We still need to talk about the use of networks and how you can leverage the social structures so that they provide value beyond adding one more contact to your list. Here, we look at what function networks have and where networks are helpful structures in your life as an entrepreneur. Let us reduce networks to three primary functions that are determined by the type of connection between the people involved: information transfer, trust and collaboration, and resource access. These functions are both the assets networks provide and the result of your efforts when building and maintaining a network. In a broader network structure, people—even people unconnected to you—start interacting with each other, exchanging information or resources, or just feeling connected to some more expansive community.

Trust and Collaboration. First and foremost, trust and collaboration are the functions of your network. Trust among the participants in your network is the essential element that connects individuals. Just think about your personal network. Most likely, the people closest to you are the ones you have a trustful relationship with. The trust supports the other functions of the network and makes collaborating more likely. In a highly uncertain environment, trust gives you a sense of security by knowing the people around you are on your side.

Moreover, think about how others perceive you and your venture. You are new to the market, have no reputation yet, and do something new that the world does not know so far. What helps you still receive attention and make others want to engage with you? The answer is trust. Somehow, it would help if you convinced others about your trustworthiness (Fisher et al., 2017). No matter what kind of business you pursue, if you, for example, open a restaurant or develop an innovative software solution, you must be considered a trustworthy party to the network around you (Fisher et al., 2017). The trust of people in your existing network is critical; it demonstrates that others have already taken a chance on you—a powerful mechanism to find new connections.

Consider your network in each dimension of the vertical chain. Your suppliers, partners, and customers all matter. If you face a liquidity shortage, the supplier who trusts you may still deliver, although the bill from last month is still open. The customer who trusts you may not share the fact that your product still has some shortcomings but rather help you fix the issue. Trust may start or end network links.

Information Transfer. One essential function of networks is the flow of information between you and others. As you probably know, information and data are increasingly important resources. Consider the information flows between you and others as precious. When you talk to people who know more about something than you do, listen carefully, take their advice, and seek information that closes your knowledge gap.

Information can be very technical, help your operations, and guide you to avoid the pitfalls others have fallen into. It can even give you an edge over others. Remember the importance of validating your ideas and products. Eventually, you seek information from others to refine your product. See how vital information flow is? Now, imagine how powerful active information management through your network may become.

Resources Access. Resources are essential to grow your start-up. In the beginning, most entrepreneurs lack time, money, and knowledge. Luckily, you have a network to help you access such crucial resources. Remember to give what you take, so think about opportunities to create synergies.

Leveraging Communities—Mastering Mutual Network Functions

Look at the rare but highly successful cases of developing networks into communities. In some cases, entrepreneurs and companies can build a business model around networks or leverage their business model through networks. On social media platforms, for example, LinkedIn, you will find "evangelists" of a particular company; in marketing slang, you will see "love brands" who have "fans" instead of customers. Building communities may be the result of successfully leveling all the described functions.

How do you get there? Have a steady interaction with your network, offer more than the core value of your start-up, and provide a benefit for somebody to spend time engaging in your network. When you create value that goes far beyond your core business and solve problems for the members of your network and when you stimulate the lifestyle they desire, help them reach their goals, and create a feeling of belonging, you are doing it right.

An indicator of building a community is that your network grows on its own. You become a reliable partner and take an essential role in other people's lives. You offer something revolving around a topic you are passionate about and want to foster others' passion about it as much as possible. These are the most potent networks you can engage with. Shape them actively, and you will see how they benefit your venture.

There is a lot of power in centralizing decentralized efforts. An active community will bring valuable connections to you, and you do not have to go out and build them up. You will extend your resource access, potential collaborations, and knowledge flow. However, keep in mind that managing a community takes effort as well.

Does this sound difficult? We never said it was easy. Yet we think it is worthwhile. It takes time. Do not expect your first intervention to be a glamorous success. Take the German company OMR, for instance. OMR started as sessions of a small group of friends who shared their expertise in online marketing. Over the years, their meetings grew bigger as everybody started bringing some more people. The network of friends (strong ties), their friends, and their friends' friends' friends (weak ties) developed into a community of like-minded peers, sharing their latest marketing insights. Today, the company employs several hundred people, hosts one of the largest business conferences in the world, and has a diverse product portfolio around digital marketing (Online Marketing Rockstars, 2023), all supported by its community.

You Are the Creator of Your Networks—Do Not Be Afraid of Approaching People

Relationships are about the long game. But you should not forget the short game. Approaching people and breaking the ice is an important step here. One fear we encounter from students and budding entrepreneurs alike is precisely that: approaching people. Because they might feel very junior, the perceived power distance is considerable. "Why should they talk to me? I have no experience."

Let us assure you: First, every person has something that makes them unique and exciting: capabilities, skills, experiences, and successes. And you do, too. Sometimes, we forget about this. If you want to reassure yourself about your accomplishments, start writing a "success file" where you keep a log of all your successes. Second, when approaching people, be authentic. Think about something you want to discuss; do not come up with the same line a person always hears. What would be the most provocative question you can ask a CEO? Which topic is not apparent and yet urgent? You have nothing to lose—unless you misbehave. If you do, your reputation is at risk. At times, even this is not worth worrying about, the world is huge and there will be other opportunities.

A good start is to adopt a mindset of giving and sharing—this is the export dimension Burt mentioned. Why not open a talk with something like “What problem do you have that we can discuss? Where would my perspective be helpful?” Unfortunately, many people see networking as a one-way street. But it is not. When you become valuable to the people around you, they will appreciate it and return the favor.

Your most important trait for networking is your genuine interest in other people. Here is what you can do to grow your networks.

- List of what you can offer and do.
- Give to your network, and it will give back to you.
- Be aware of the different positions in a network, how to occupy them, and how to act in a particular manner.

Positions in a Network

In a network, you can have positions that have different properties and that—in the context of entrepreneurship—give rise to different behavioral strategies. To illustrate this, in Fig. 1, we visualize how Persons A, B, C, …, and L are connected to each other. Assume that this is an information-sharing network; hence, the link (represented as a line) between people is the exchange of information. For instance, the line between F and E indicates that F and E exchange information.

Isolates. An isolate is a person, such as Person B, who is currently not connected to the network. Connecting to the network and benefiting from the information shared within this network requires that Person B starts sharing information with one of the people in the network. You see the beauty of this: By sharing information with one person in the net-

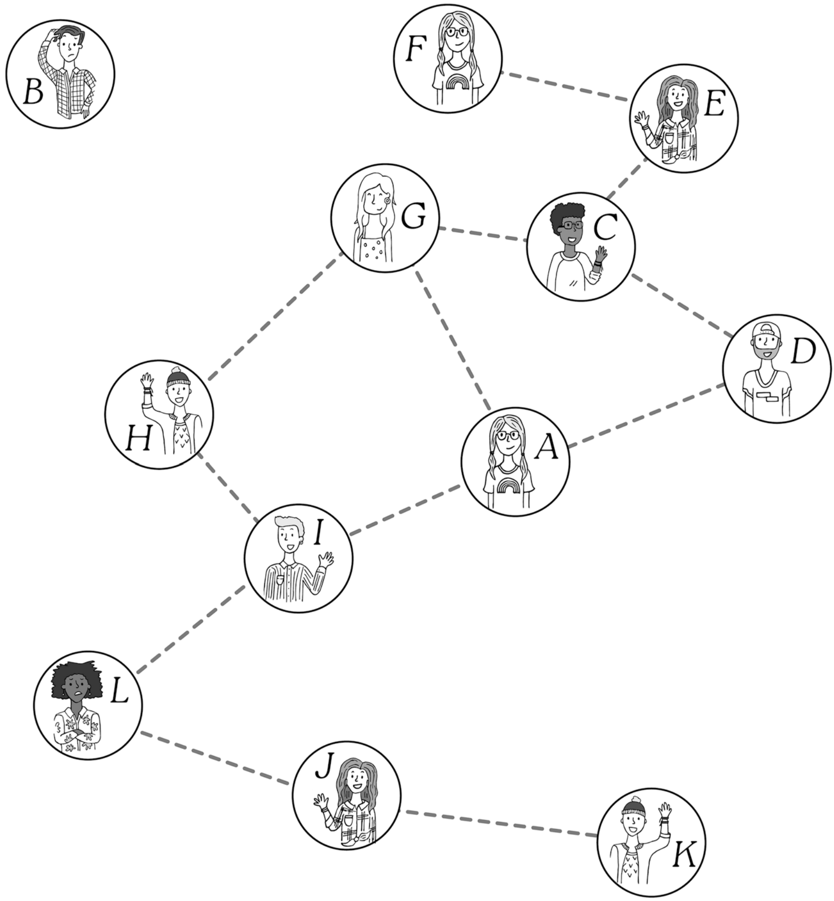

Fig. 1 An example network visualizing how Persons A, B, C, …, and L are connected to each other. Authors' own figure

work, B can gain indirect access to the information shared throughout the network.

Periphery. If you look at Person K, you will see that they are only connected to one person in the network. K shares information with only one person. At first, you might think K is not an attractive partner for conversation or knowledge sharing. However, K might be embedded or connected to other networks that you are not looking at. If this is the case, K can be a valuable partner to communicate with because K might have access to knowledge, information, or resources that are not available in the network. To find out, you have to interact with K.

Connector. A connector is a person with many direct connections. In this network, Person G would be a connector; they have the most (four) connections. Connectors collect lots of information from the persons immediately connected to them. Connectors seem to be popular people in the network because they are well connected to a lot of others. This puts some pressure on their schedule. Networking and building relationships is time-consuming, and you might fear that your downtime might suffer because of it. But there is a lot of underutilized time during the day when you commute, when you drive, or when you cannot do anything because you are in a food coma after lunch. Sometimes, it is helpful to think about things you do. Inviting someone to join can be a welcome opportunity to build and cultivate your relationships. In extreme cases, however, connectors might suffer from information overload, which may make it hard for them to allocate their attention to important information. A good note-taking or journaling routine will certainly be conducive to sorting and evaluating information later on.

Broker. Person I is a broker in the network. They connect two parts of the network (Persons L, J, K, and the rest of the network) not connected to each other. Brokers are in a beneficial situation when—and this is the underlying assumption—the people in both parts of the network have access to different information, knowledge, or resources. Bringing these together might unleash creativity and innovation. There are two strategies for the broker. Brokers might place themselves in the center of the network between the two parts and exploit the differences in information, knowledge, or resources. Hence, in doing so, the broker exploits the power they have through their position in the network. Or the broker tries to establish a link between the two parts of the network. Person I might establish a connection between Person A and Person J or between Person H and Person L, for instance. If you are a broker, it is always helpful to think about what is in it for both parties. If you have a reason to connect these two people, then you might also share it with them. Richard Branson, founder of the Virgin Group, gives a pointed description of what it meant for him to be a broker (Wagner, 2021, n.p.):

> "…if I had to give one reason why I've been fortunate enough to experience some success, it would be my knack for bringing together wonderful people."

When you are close to a broker, it is helpful if you maintain a clear profile. Your network, the brokers in particular, will also reference you and connect you with other people with whom you can create synergies. Of course, never forget to give back!

Influencer. An influencer is a person who is somewhat close to all of the other persons in the network. It is not necessarily the person with the most immediate connections. In our network, Person A is the influencer. It is not instantly apparent from the visualization. Note that network analysts compute a measure called the "closeness centrality" to identify those people who are the closest to everybody else in the network. Because Person A is closest to everybody else in the network, they can influence the other people in the network more immediately than all others in the network. If you want to spread information in a network, then it is a wise choice to use the influencer position in a network to do so.

Avoid Networking for the Sake of Networking

Although we encourage you to work on your network actively, we do not recommend that you network for networking's sake. In other words, manage your time wisely. Time is among the most valuable goods in life (not just for founding a company). Time is unique and irreversible. You can get sick and recover. You can make money and lose it and make money again. Time is different. So choose wisely how you spend it—and with whom.

Unfortunately, many budding entrepreneurs spend either too little or too much time on networking activities. Networking is not about attending every possible event and collecting leads that go nowhere. Be systematic when selecting the networks you want to engage with, and think about building and sustaining a network. Attending every event distracts you from creating value for you, your venture, and your networks. Earlier, we recommended thinking about what you can offer to your network. Can you offer each person you meet something in advance or in exchange? Is there somebody you already know and might want to catch up with? Sustaining a network is equally important as building one. Use this heuristic as a guide when selecting your network activities.

Moreover, the chances are high that you will become less effective in networking when you overdo it (Laursen & Salter, 2006). Over the years, we have learned the following lesson: Choose wisely where you go and with whom you try to connect instead of hustling from one event to another. Choose events that correspond to your mission, and do not attend everything. Even though you might have heard stories that, at a very unlikely event, people ran into other people who turned out to be extremely important for their career, business, or future in general, do not overestimate the value of serendipity.

You Decide Upon Your Network

The people around you have a more substantial impact than you may expect. Despite their subliminal influence on your decision to venture (Nanda & Sørensen, 2010), studies also highlight various image spillover effects (Aarstad et al., 2010). Suppose you would be judged solely by the people you engage with—how would that feel?

Take the metaphor of a bar you enter in the evening. You look around and spot several groups: strangers, acquaintances, and friends. Which group would you like to join? Now, imagine other people looking at you as well. They see you next to one of these groups. Who would you rather not be seen with? You also do not want to have these people in your network. Remember, networking is not a one-way street. If you do not want to be seen with somebody, you do not wish to be associated with the person and, indeed, do not trade favors.

Apply that to your network. Do not feel obliged to build relationships with anyone just because the person might be helpful for your venture. Think about the personal level, and do not try to get as many high-profile people as possible into your network while ignoring their values, attitudes, and behaviors.

Does it make sense to ignore a person's character and still build a relationship? You have to answer that for yourself. We recommend creating a high-quality network of people instead of having as many links as possible. The number of people you know is not irrelevant, and weak ties are powerful (Granovetter, 1973). Still, research shows that entrepreneurs often misjudge the value of new connections (Vissa, 2011) and that the quality of the network tie matters for a reciprocal relationship besides the sheer number of people you know (Pollack et al., 2016).

Three Things to Do Right Now

1. Reflect upon your network. Who is the most interesting person you know? Who are the two most different people, and how do they differ? Who is helpful for your venture? What is your current role in the network?
2. Look for network meetings in your region and online. Three kinds of networks will be attractive: entrepreneurship networks in general (e.g., founder talks, co-founder matchings, start-up nights), domain-specific networks with a high density of expertise in your field (e.g., food science and food industry), and domain-specific entrepreneurship networks (e.g., food start-up festivals, food start-up pitches). Is there any network you can join? Schedule some network activities for you and reach out to three contacts.
3. Orchestrate collaboration and communication. Start building your network and developing a community. Take a proactive role and bring people together. Design workshops, forums, or a project that invites collaboration and sparks communication. You are the one who designs pathways to success for the members of your community.

Further Down the Rabbit Hole

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- Borgatti, S., Mehra, A., Brass, D., & Labianca, G. (2009). Network analysis in social sciences. *Science*, *323*(April), 892–896.

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- Easley, D., & Kleinberg, J. (2010). *Networks, crowds, and markets: Reasoning about a highly connected world*. Cambridge University Press.

A theoretical and economics-inspired treatise on networks exploring the reasoning behind network dynamics and their implications in various contexts.

- HBR (Eds.). (2022). *HBR guide to smarter networking*. Harvard Business Review Press.

This small book explains the value of networks, offering insights on how to build and maintain them and how to maximize the benefits of existing connections.

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Embracing the Entrepreneurial Challenge: Learning from Failures and Setbacks

In this chapter, you will learn …

… why it is essential to adopt a mindset that is geared positively toward failure,
… how you can cope with everyday setbacks you will inevitably experience over your start-up journey, and
… how to make the best out of a start-up that failed utterly.

Accept the Inevitable—Don't Let Fear Stop You

Ninety percent of all start-ups fail. Really? You have probably heard similar numbers circulated in the media, in blog posts on the web, or in casual conversations. Don't get us wrong: Yes, starting a venture is risky. There is never a guarantee in the beginning that you will really make it, and even if you might achieve product market fit or business model fit, there is always the chance your start-up fails. We write this book during a time some say is best described as one of polycrisis. Just think of the devastating effects the COVID-19 lockdowns had on society and also on innovative start-ups (Kuckertz et al., 2020). And these crises seem to be

A. Kuckertz et al., *Mastering Your Entrepreneurial Journey*,
https://doi.org/10.1007/978-3-031-71064-3_10

multiplying! It is a fact: Even if you feel you have done everything right, it is always possible that dramatic changes put your venture at a risk that you could not possibly have foreseen.

However, we need to put the allegedly dramatic failure rates of start-ups into perspective. What entrepreneurial failure is and how it could be measured is far from easy to answer. Some studies simply declare every start-up that does not exist 5 years after its gestation to be a failure. Such approaches are at least one reason for extremely high failure rates (Josefy et al., 2017)—but these methods are flawed. The actual reasons why these start-ups are not around anymore are manifold. The start-up might indeed have failed, but some entrepreneurs might have already exited their venture by selling it, and some might have closed down a viable business to pursue even more promising opportunities. Would that really be a failure?

For us as academics, this is a somewhat shameful picture. After decades of entrepreneurship research, we still do not know precisely the prevalence of failed start-ups. However, we know that people in many different countries around the globe are afraid of failure. Even in an economy that is usually said to be quite open to failure, such as the USA, 4 out of 10 adults in the working population who generally perceive good opportunities in their closer surroundings to start a business report that they would not start because they fear their business might fail (GEM (Global Entrepreneurship Monitor), 2023).

If this is how the world is, you should start to think about failure and your attitude toward it. Society is missing out on many positive effects of entrepreneurship (e.g., job creation, economic growth, and innovation, to name just a few), because people are afraid of failure. Similarly, you yourself do not want to miss opportunities because of some diffuse worries that something might go wrong while pursuing these opportunities. The right mindset helps—in day-to-day business when facing the challenges of starting a venture, as well as in the extreme case of a wholly failed start-up project.

Fail Forward—Welcome Everyday Failure

Being an entrepreneur has many positive aspects, and many are drawn into entrepreneurship by these aspects. There are not many alternative career paths available that offer as much autonomy and freedom. You are the one who decides! And hopefully, you have decided to solve a problem with your venture that you perceive as being meaningful. In addition, the upward potential of starting up is close to infinity. There is a lot of money to be earned.

Yet these good things have many potential downsides and are often paid for with much stress. Freedom in the workplace can be too good of a thing for some of us (Stiglbauer & Kovacs, 2018), especially because it comes with much uncertainty. Whether your venture will succeed is ultimately a decision the market makes. It can sometimes take years to determine whether an entrepreneur has a good nose for what works. And quite frankly, the prominent, financially successful examples come with many less notable cases where little to no money was made. In addition, leading a start-up can be a lonely affair, and some entrepreneurs are so immersed in their projects that the start-up virtually eats them.

This stressful situation is complicated by the fact that, inevitably, any number of things will go wrong on your start-up journey. You are doing this for the first and likely last time. Even though there is this elusive group of entrepreneurs building one venture after the other, for most, this is a once-in-a-lifetime experience. Given this unique situation, there is no other choice: You will have to fail forward. Suppose perfectionism brought you to where you are today. In this case, you must get rid of it as quickly as possible and adopt a mindset that better fits an entrepreneur's life.

Generally speaking, to be afraid of failure is absolutely fine. Experiencing fear can even be a precious signal; it points you to what you should attend to. As such, it can serve as an intuitive method to sort your priorities right. Don't suppress this fear; instead, use it to become clear about what exactly is causing it so that you can tackle this cause. Anxiety can help clear up the initial chaos of starting a business.

Suppose you are an uncompromising engineer, programmer, or data scientist. In this case, you may find the following paragraphs strange and maybe even a bit esoteric. However, a growing body of evidence-based literature suggests that meditation, in particular, can be more than helpful for entrepreneurs. For instance, Moder et al. (2023) illustrate that practicing mindfulness meditation helps entrepreneurs be more creative when searching for business opportunities.

Concerning the fear of failure, Engel et al. (2021) show that loving-kindness meditation reduces this fear because this type of meditation helps entrepreneurs build higher levels of self-compassion. These research results are only surprising at first glance. Loving-kindness meditation means you initially concentrate on sending feelings of love and kindness to yourself and then subsequently send these positive feelings to others. First, those relatively close to you until, in the end, you may even include the whole world. And don't forget those people you cannot stand at all! The mechanism explaining why this helps you deal with the fear of failure is straightforward. This variant of meditation allows you to be kinder to yourself; that is, you enhance your self-compassion. Being afraid of setbacks and failures means you envision yourself as upset or blame yourself if something with your venture does not develop as expected. However, a mindset that helps you be gentler and more understanding of yourself ensures that you put yourself under less pressure.

And just as working on your mind helps, reaching out to others is also essential. There is a reason why many start-ups are formed by teams and not by lone entrepreneurs. Teams can provide psychological safety (Patzelt et al., 2021) when the going gets tough. And this safety can sometimes even be supplied by other entrepreneurs. When the COVID-19 lockdowns hit (Kuckertz et al., 2020), we saw many entrepreneurs in our local ecosystem flock together on instant messaging services such as Slack to exchange their frustrations and challenges and, of course, to help each other out. Remember, never underestimate the positive energy of a community.

Fail Fast—Speed up Learning

Let's do a slightly uncomfortable thought experiment. Assuming your start-up fails, how would you deal with this situation? We will not cover the legal side of such an event because this will likely vary depending on where in the world you are reading this book and under what jurisdiction. However, some aspects are universal: You must find a way to cope with your failed start-up, learn from this experience, and draw the correct conclusions.

Research by a team around Tom Lahti from the Hanken School of Economics indicates how hard failure for entrepreneurs can be. When the researchers placed entrepreneurs and parents into a functional magnetic resonance imaging scanner to picture their brains and had them talk about their ventures and their children, respectively (Lahti et al., 2019), they discovered considerable parallels in neural reactions for both types of participants. In other words, it seems entrepreneurs care as much about their ventures as parents do about their children!

The best way to prepare for this is to embrace a saying from the start-up scene: fail fast! Don't misinterpret this saying as an invitation to fail—failure is never the goal. However, the fail-fast dictum reminds us of the danger of escalating our commitment. Parents should always stand by their children, but entrepreneurs must be able to abandon their less-promising projects. It is easy to confuse stubbornness with grit when your start-up does not develop as you initially envisioned, and it is easy to become emotionally too bonded to a start-up project. Remind yourself of the affordable-loss principle discussed in Chapter "Demystifying Entrepreneurship: What It Is and What It Is Not." Define how much time and resources you want to devote to a start-up, and let go when you reach that threshold. There is no need to be scared of this decision, as tough as it might feel.

In our research investigating the career paths of entrepreneurs who terminated their ventures (Mandl et al., 2016), we found that the failure event was just a bump in the road for these entrepreneurs. Almost all of them continued their career after their start-up—either by starting a new venture or entering paid employment.

In addition, it is conventional wisdom that you can learn a lot from every failure experience. Some even think that, to become a successful entrepreneur, you must develop yourself over a series of failed start-ups toward ultimate success. Consider the path of Max Levchin, co-founder of PayPal. This classic start-up has significantly changed how e-commerce is conducted and how many of us pay our bills and exchange money online. To arrive at such a successful business, Levchin's way was more than rocky; it is an exceptional story of grit and learning from what worked in the past and what did not. In a radio interview, he summarized his journey (Montagne, 2009, n.p.):

> "The very first company I started failed with a great bang. The second one failed a little bit less but still failed. The third one, you know, proper failed, but it was kind of OK. I recovered quickly. Number four almost didn't fail. It still didn't really feel great, but it did OK. Number five was PayPal."

So if your start-up fails, should you try again? You might think you naturally learned a lot because you did it once. Now, building a successful venture will become a lot easier. You are one step closer to success. Right? As much as we would love to subscribe to this view, unfortunately, the start-up life is a bit more complex. A study by Nielsen and Sarasvathy (2016) illustrates the challenge. In their analysis of the complete population of Danish entrepreneurs over more than 25 years, that is, roughly 40,000 individuals, they find that failed entrepreneurs indeed learned from their experience but do not necessarily derive the right lessons. While some who would be well positioned for success with a new start-up shy entirely away from new entrepreneurial projects, others who should have concluded that entrepreneurship is not for them keep wishing for the impossible and start over and over again.

Extracting the correct teachings from a failed start-up will require serious reflection. Here are some factors you might want to look at should you need to make sense of a failed start-up (Mandl et al., 2016):

- Where would you locate the reason for failure? Was it inside the firm, for instance, could the team not agree on a joint vision, which then led to a split and the formation of a rival start-up, or was it outside the firm, like the perfect storm that hit so many start-ups when, all of a sudden, economies locked down as a response to the COVID-19 pandemic (internal vs. external reasons)?

- Was the reason for failure something you could have successfully controlled, such as failing to secure essential intellectual property rights, which led to a legal battle with a giant corporation (the dice are usually loaded against start-ups in such settings)? Or was it entirely outside your sphere of influence, for instance, an essential team member becoming permanently ill and, thus, no longer being able to contribute to the development of your start-up (controllable vs. uncontrollable reasons)?
- Was the reason for failure permanent or a one-off event? If you find, for instance, that your family did not support your entrepreneurial endeavors, this is likely to persist in the future. In contrast, a short circuit causing your office building to burn down is hopefully and probably something you will only experience once in a lifetime (permanent vs. temporary reasons).

Entrepreneurs perceiving the cause of their failure as being permanent yet controllable usually abstain from engaging in new ventures. We tend to agree with them; they have learned something about themselves and how they approach entrepreneurship, which seems to determine the outcome of attempting to exploit other opportunities.

To summarize, as scary as failure is, we must be clear that its consequences are often dramatized and exaggerated. Still, you will experience many setbacks during your entrepreneurial journey, and having and building an appropriate mindset to cope with these setbacks is essential. Meditation might help, but sharing your challenges with others will also help. And should you fail entirely with your start-up, don't take learning for granted. Make sure you have drawn the correct conclusions before kicking up your next project, which is, of course, always the best cure.

Three Things to Do Right Now

1. Check out whether meditation is right for you. There are guided loving-kindness meditations on YouTube and many different apps for your smartphone. Have an open mind and see whether these techniques help you to better cope with the many challenges you experience on your entrepreneurial journey.
2. Generally, self-reflection is a powerful tool to develop yourself as an entrepreneur (Hägg, 2021). Let's work on your growth mindset! Think about your entrepreneurial journey and remember a situation where you felt completely without control. Write this down. Now, reflect on all the external influences that might have led to this situation. Doing so is probably the easy part. Then, challenge yourself: How have your actions, decisions, and attitudes shaped this situation? The more you collect from the latter, the better. Use this input to rewrite your initial narrative; it will help you to focus on the aspects that you can shape. Reflect on the situation: What will you do if you stumble into something similar in the future? How will you change your approach or maybe your attitude? Repeat this exercise regularly to build your growth mindset and learn to focus on the things under your control.
3. Talk to people in your local start-up ecosystem, especially experienced entrepreneurs. Experience here does not mean those who have managed one business for ages. Experience means having started several ventures in the past. There is much to learn from these serial entrepreneurs. Draw your conclusions. Who is a serial failure? Why? Who has failed forward, that is, who has learned and put their experience to good use? What is your bottom line?

Further Down the Rabbit Hole

- Danner, J., & Coopersmith, M. (2015). *The other "F" word: How smart leaders, teams, and entrepreneurs put failure to work*. Wiley.

Failure is a nasty word. In this book, Danner and Coopersmith show how one can reduce the fear of failure that can stop people from being self-starters. They also present several helpful tools to leverage failure and turn it into a catalyst for success.

- Curran, T. (2023). *The perfection trap: The power of good enough in a world that always wants more.* Cornerstone Press.

Being an entrepreneur and, at the same time, thinking of oneself as a perfectionist do not go well together. Curran provides a profound analysis of the origins of perfectionism, shows how undesirable it is, and instructs us on how to work on ourselves so as not to end up in a perfection trap.

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