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A developmental approach to support entrepreneurs in the digital era"

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CONTENTS

INTRODUCTION: TOWARDS A NEW PARADIGM

People in most countries are experiencing an entrepreneurial renaissance. However, these opportunities rife with many perils. For any company that achieves success, there are far too many failures,[1] such as: "products pulled from shelves mere weeks after being launched, high-profile startups lauded in the press and forgotten a few months later, and new products that wind up being used by nobody" (Ries, 2011). These failures often result in severe economic damages to companies, investors, and individual employees. However, what makes them even more painful is that they represent an enormous waste of the most valuable resources of civilization: people's time, passion, and energy.

There are many reasons why new projects fail, including the illusion of good and reliable planning (Ries, 2011), the adoption of traditional approaches to project management (Blank & Dorf, 2012), and the desperate commitment to perfection at all costs (Fusco, Spagnolo, & Pinna, 2017). The literature offers a variety of methods, frameworks and philosophies to help people succeed in the innovation challenge. In the past thirty years, designers have spread the ideas of human-centered design, or Design Thinking; entrepreneurs and business professors such as Eric Ries and Steve Blank have developed Lean Startup and Customer Development; software developers have organized their work according to the principles outlined in the Agile Manifesto. Academia provides countless stories and examples of how companies have adopted these approaches, but they are no longer enough. The world is evolving; digital transformation is advancing at an increasing pace, and it confronts companies with the urgent need to change. The challenge is clear: whatever the sector or industry a company belongs to, it must adapt and reinvent itself. It has to embrace new organizational models, management principles, processes, and techniques to foster and stimulate innovation.

Business Telling promotes an iterative, flexible, and dynamic approach that managers and entrepreneurs can follow so as to exploit the many opportunities that characterize the digital era.

[1] In the broader consumer-products market, some of the best data on new-product failure comes from Nielsen Company's research: Approximately 80–85% of new products fall short of their original expectations and are categorized as *failed*, *disappointing*, or *canceled* (Nielsen Company LLC, 2014).

1. THEORETICAL AND METHODOLOGICAL PREMISES

1.1 The methodology adopted in the study

The methodology is structured in three steps: literary research, development of a new approach with expert support, and testing of the approach in real-case scenarios.

I searched for and read several books, articles, and academic studies to create a solid basis of knowledge. Some of the many authors included are: Eric Ries, Jurgen Appelo, Jeff Gothelf, Alberto Savoia, and Alexander Osterwalder. The goal was to collect, analyze, and learn the current theories, approaches, and practices that entrepreneurs and managers adopt to foster innovation in the digital era.

I also interviewed innovation experts from all over Europe, such as Marty de Jonge, Alberto Savoia, Jeff Gothelf, Stéphane Cruchon, and Matteo Fusco. I wanted to strengthen the knowledge that I obtained through my readings and determine how trends were evolving.

The research process, along with the experience I attained by participating in extra-curricular activities (i.e., hackathons, startup and business competitions, workshops, and training programs[2]) enabled me to create Business Telling: an iterative, flexible, and dynamic approach to innovation. Several managers, entrepreneurs, and business experts followed me during the development process, by giving professional advice and ensuring that everything was well-balanced.

As soon as Business Telling was completed, I tested it in three different contexts: International Business Games, a startup project, and the Junior Enterprise of the University of Padua (JEst).

In summary, this thesis is the result of an accurate research process and field-testing activities, and it includes many real-word stories. I selected and summarized each example to explain a given concept, technique, or moral. The evaluation criteria were: maximum usefulness, impact, and memorability.

[2] These activities were mainly organized by Large Enterprises (LE), such as Cattolica Assicurazioni, Accenture, BNP Paribas, and Luxottica.

1.2 The effects of digital transformation on the Italian market

Digital transformation affects each and every aspect of the modern economy (Fitzgerald, Kruschwitz, Bonnet, & Welch, 2014). There are no organizations, public companies, or even single individuals that can escape from this phenomenon and its effects (Galindo-Martín, Castaño-Martínez, & Méndez-Picazo, 2019). Technological advances are continually shaping the way people live and work. Competition becomes fiercer, day by day. Customers are more demanding now than they were five years ago. They are more difficult to please and will immediately turn to other companies if they do not feel satisfied (Anders, Kristensson, & Witell, 2012). The shift to the digital era is not only inevitable but also immutable, fast, and radical (Osservatorio Startup Intelligence; Digital Transformation Academy, 2019). It is not only about knowing and adopting new technologies, such as Social Media, Blockchain, and Artificial Intelligence. It involves several implications that spread in every dimension (Huarng, Hui-Kuang Yu, & Lai, 2015). Digital transformation imposes a harsh change of direction on companies (Bharadwaj, El Sawi, Pavlou, & Venkatraman, 2013). Traditional and standard models are no longer suitable for managing innovation and pursuing the many opportunities that arise. They are too slow, closed, and sometimes expensive (Osservatorio Startup Intelligence; Digital Transformation Academy, 2019).

Knowing how to manage and foster innovation is a challenge increasingly felt by managers and entrepreneurs. Traditional cascading approaches must leave room for more comprehensive philosophies that encourage continuous iteration, incremental value generation, customer involvement, empathy, and team empowerment (Osservatorio Startup Intelligence; Digital Transformation Academy, 2019). A new *innovation-driven culture* must grow and spread across companies. Ambidextrous organizations must be born and work simultaneously on the exploitation of existing resources and competences, and the exploration of new opportunities (Åkesson, Sørensen, & Eriksson, 2018; Tushman & O'Reilly III, 1996). Research of Digital Transformation Academy and Osservatorio Startup Intelligence exhibited an emerging trend toward the adoption of new organizational models and management principles[3] to foster innovation (see Exhibit 1.1).

[3] Only 22% of companies that answered the survey manage innovation in an unstructured way (Osservatorio Startup Intelligence; Digital Transformation Academy, 2019).

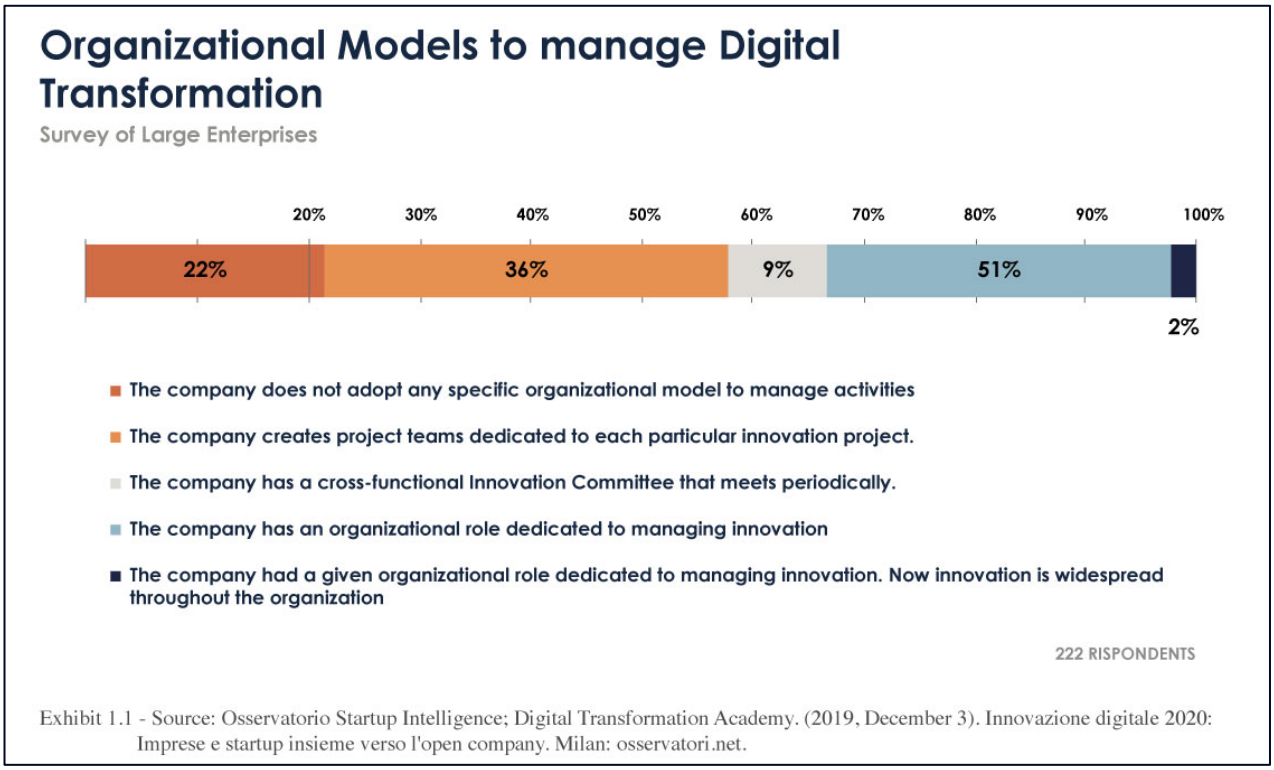

Exhibit 1.1 - Source: Osservatorio Startup Intelligence; Digital Transformation Academy. (2019, December 3). Innovazione digitale 2020: Imprese e startup insieme verso l'open company. Milan: osservatori.net.

In this context, the company's ability to incite the entrepreneurial attitude of people plays a significant role (Osservatorio Startup Intelligence; Digital Transformation Academy, 2019). An increasing number of large enterprises (LE) are adopting several solutions to promote a culture typical of the startup world, where all resources act within an entrepreneurial and proactive attitude toward the recognition and pursuit of new opportunities. These practices include the adoption of leadership styles addressed to encourage personal growth and change management, training programs, and the establishment of new organizational roles, such as the Innovation Manager (see Exhibit 1.2). Companies are trying to adapt.

The market is moving toward a new era (Bharadwaj, El Sawi, Pavlou, & Venkatraman, 2013). The exploitation and integration of digital technologies are affecting companies' offerings, business processes, sales channels, and supply chains (Matt, Hess, & Benlian, 2015). Potential benefits include increases in productivity and sales, innovation in value creation, as well as new ways to interact with customers (Matt, Hess, & Benlian, 2015). Organizations aiming to transform, reshape, or replace their business models need to reinforce the capabilities and skills for flexibility and responsiveness to fast-changing customer requirements (Berman, 2012). They must strengthen their ability to recognize, evaluate and pursue the right opportunities. Business Telling serves this purpose. It promotes a dynamic, flexible, and iterative approach companies can follow to exploit

innovation in the digital transformation. It gives people a compass so they could get their bearings in the transition towards the new paradigm.

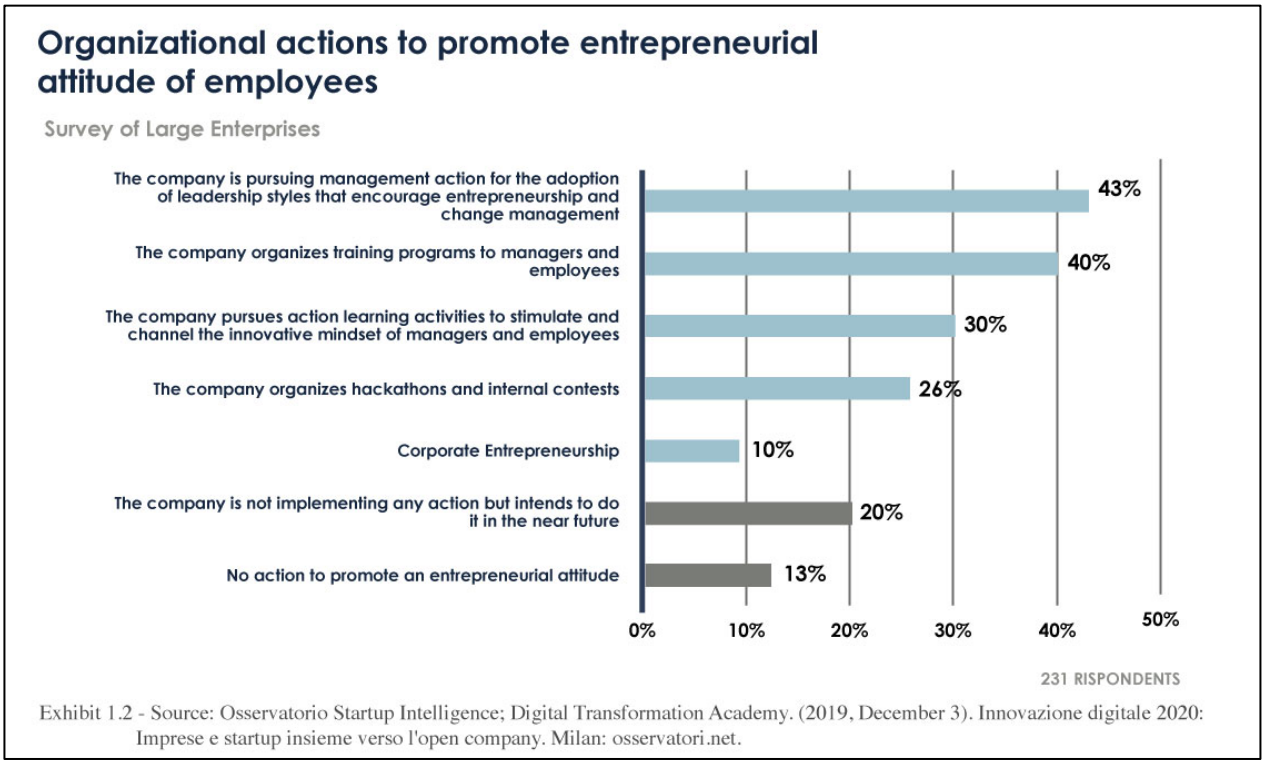

Exhibit 1.2 - Source: Osservatorio Startup Intelligence; Digital Transformation Academy. (2019, December 3). Innovazione digitale 2020: Imprese e startup insieme verso l'open company. Milan: osservatori.net.

1.3 Emerging approaches in Academia

Digital transformation and technological advances are radically shaping the way organizations operate, compete, and interact (Bharadwaj, El Sawi, Pavlou, & Venkatraman, 2013; Bresciani et. al., 2018). To make the most of the opportunities, entrepreneurs, managers, and intrapreneurs try to implement iterative methods that promote experimentation, formulation of hypotheses, testing, and learning (Ghezzi & Cavallo, 2018). The most popular ones include Design Thinking, Lean Startup, Customer Development, and Agile. However, there is a problem: sometimes, they do not keep up with all the flexibility and dynamism that companies need (Gothelf, 2020).

Academia tends to consider all these methodologies as stand-alone tools, eventually raising barriers and limitations to innovation (Gothelf, 2020). The reason is apparent: there is no single framework, discipline, or technique able to tackle all the problems, obstacles, and needs that companies encounter during their life cycles (de Jonge, 2019). Sometimes, companies need to analyze customer behavior and understand the reasons behind a given success or failure. Sometimes, they must build a prototype and ensure that the process goes smoothly. Sometimes, they have some key hypotheses that require validation. No method has proven to be the best in all the circumstances.

Companies should adopt different strategies over time, according to the specific problems and needs that arise (Zawadi, 2019).

An increasing number of business experts, such as Jeff Gothelf, Jurgen Appelo and Marty de Jonge are currently publishing books and articles that support the need to manage innovation without being overly devoted to given practices or frameworks. They consider all the most popular approaches to innovation as the tiles of a beautiful mosaic that has been designed to help entrepreneurs, intrapreneurs, and managers succeed in situations full of uncertainty.

In particular, the two emerging movements I took inspiration from in creating Business Telling are Agnostic Agile and Lean UX[4]:

- *Agnostic agile.* The term *agnostic* in information technology refers to something that is so generalized that it can communicate, operate, and exchange information with various systems. Agnostic agile emphasizes that agility is a mindset and not a set of processes. Marty de Jonge explained it in the following words: Agile is like an umbrella that functions as a safe place for the diverse practices to find shelter. Always begin with the question, "What problem do we have to solve?" Before jumping to a specific practice or framework (de Jonge, 2019). In other words, as the Agnostic Agile Oath says: "one size does not fit all, one framework is not the answer and the *what* and the *how* of what needs to be done, should be suited to customer context and to a wider strategic vision*" (Zawadi, 2019).*
- *Lean UX.* Lean UX represents the junction of Lean Startup, Customer Development and User Experience (UX) design. Jeff Gothelf defines it as "the practice of bringing the true nature of a product or service to light faster, in a collaborative, cross-functional way" (Gothelf, 2020). It takes traditional practices included in a designer's toolkit, combines them with Agile, Customer Development, and Lean Startup, and makes all this package available to the entire product team.

The definition and validation of a startup's business model represent critical challenges for Italian entrepreneurs. In facing the many hurdles of innovation, they still have a limited amount of resources at their disposal (Osservatorio Startup Intelligence, 2019). The law of market failure tells us that up to 90 percent of new ideas will fail soon after being launched – regardless of how

[4] An additional framework I would like to mention is the *Shiftup Innovation Vortex* by Jurgen Appelo. The framework promotes continuous innovation by offering a seven-stream mashup and supporting entrepreneurs during product development activities.

promising they sound, or the passion that people commit to the project (Savoia, 2019). The thesis fits in this context. Business Telling presents Italian entrepreneurs, intrapreneurs and innovation managers a new approach designed to help them solve important challenges in the digital era. It offers a practical set of tools and practices to flip the odds for success in their favor.

2. ENTREPRENEURSHIP IN ITALY: A BRIEF ACCOUNT

Italy: a nation of saints, poets, and navigators, but not entrepreneurs. According to the Global Entrepreneurship Monitor 2018-2019, "the Italian economy has not yet fully recovered from the financial crisis of 2008 and the subsequent domestic recession of 2011-2013" (Global Entrepreneurship Monitor, 2019). Exhibit 2.1 shows the Total early-stage Entrepreneurship Activity (TEA) rate[5]. The Italian TEA rate is among the lowest within innovation-driven countries.

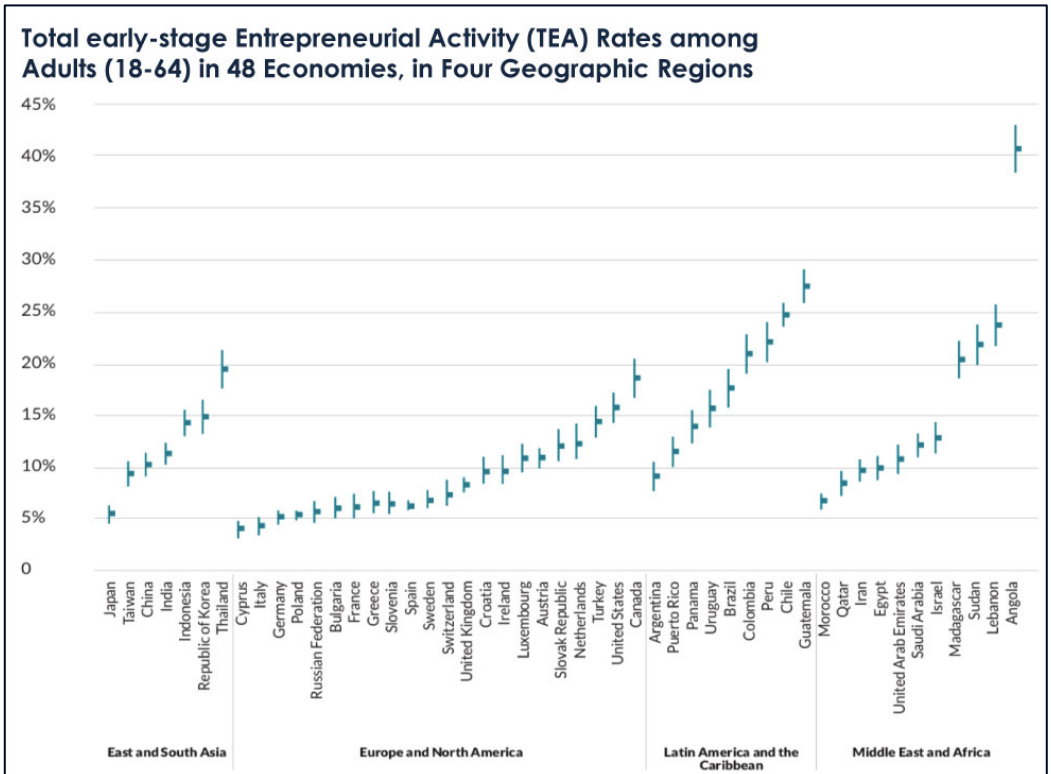

Exhibit 2.1 - Source: Global Entrepreneurship Monitor. (2019). Global Report 2018/19. London, UK: Global Entrepreneurship Research Association (GERA)

However, what is notable is that Italy is characterized by a high discrepancy between people's intentions to start an entrepreneurial activity in the near future (*Entrepreneurial Intention*) and the actual TEA (see Exhibit 2.2). The high level of entrepreneurial intention demonstrates that entrepreneurial activity enjoys a good reputation and a significant part of the population would like to start an entrepreneurial career. Problems emerge when they try to translate that intention into reality.

[5] In GEM TEA consists of the entrepreneurial activity that is centered on the period preceding and immediately after the actual start of the firm. Additionally, the moment of startup is when the company generates the first income from the sales of its products or services

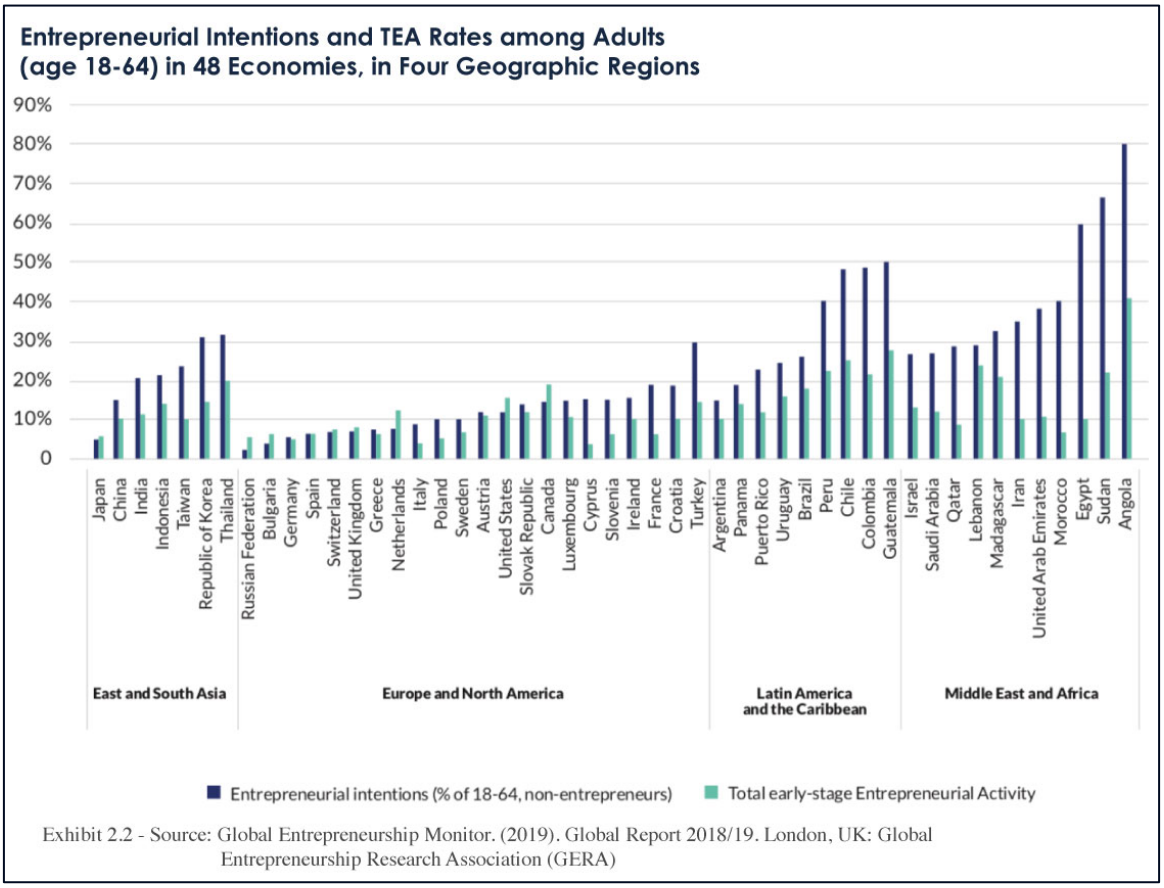

Exhibit 2.2 - Source: Global Entrepreneurship Monitor. (2019). Global Report 2018/19. London, UK: Global Entrepreneurship Research Association (GERA)

Three main factors determine such a discrepancy. First, people feel there are no opportunities to undertake. The self-perception about opportunity recognition among Italians is lower than the European average (Iacobucci, D'Adda, Micozzi, & Micozzi, 2018). Second, a significant part of the population does not think they have the capabilities required to pursue entrepreneurial activities. Even if individuals recognized an opportunity, they would not pursue it due to a self-perceived lack of skills and knowledge. Third, in our country, the fear of failure is significantly higher than the European average (Iacobucci, D'Adda, Micozzi, & Micozzi, 2018).

2.1 Entrepreneurial Intention of Junior Entrepreneurs

According to the 2018-2019 GEM report, Italians do not start their own business activities due to a lack of self-confidence. Even if they would like to undertake the entrepreneurial path, they do not feel they possess the capabilities, knowledge, and skills required to succeed. They fear failure.

These findings suggest that a work explaining the approach individuals can and should adopt in every phase of innovation development would be useful. However, without any actual proof to confirm it, the previous statement is just a hypothesis. To test it, I decided to submit a particular survey to young people who share an interest in entrepreneurial activities: the Junior Entrepreneurs. They are university students who joined a Junior Enterprise: a no-profit association whose purpose is to support the development of entrepreneurial and managerial skills among its members. The survey wanted to establish:

1. Whether they have any intention to start an entrepreneurial activity within the following three years;
2. The extent to which they view the three aforementioned problems as a limitation;
3. The extent to which they know the most popular approaches to innovation; and
4. Whether they would be interested in reading about Business Telling.

The survey was submitted to 70 Junior Entrepreneurs and received 65 answers, from which we can extract two main conclusions. First, individuals view the three issues identified by the GEM as a real limitation to start an entrepreneurial activity. Second, respondents share a sincere need to understand how to move between the many practices, tools, and techniques that are currently popularized in academia. In particular, the last question of the survey included a brief description of the thesis, allowing respondents to leave their emails if they wanted to receive the entire work. The vast majority filled the box and even sent a private message to receive additional information.

Entrepreneurship and Innovation represent major, ever-changing topics that require continuous analysis and research. The survey showed that there is a significant demand for clear guidelines and new, comprehensive, and flexible models.

2.2 Entrepreneurship in Italians' DNA

Innovation has always been a hallmark of the Italian culture. During the Renaissance, Florence was considered the cradle of many great artists and inventors (Weiner, 2016)[6]. Several artisans have impressed the world with their creations, and their craftsmanship is now in our DNA. Today, the "Made in Italy" label is still internationally praised (Fusco, Spagnolo, & Pinna, 2017). It denotes beauty, quality, and attention to detail. Italian products are appreciated and desired worldwide

[6] In *Renaissance Florence Was a Better Model for Innovation than Silicon Valley Is,* the Harvard Business Review describes Renaissance Florence as the ideal innovation hub.

(Girardi, 2019). People want to buy them because they tell a story: They are the result of the craftsmanship's heritage.

When we think of an artisan, the resulting image is usually a person who uses his or her manual ability to create unique and tailored products. However, this figure has evolved over time and can be used to describe the traits, behaviors, and approaches typical of entrepreneurship (Colletti, 2017)[7].

First, every artisan starts as an apprentice and follows the guidance of a master: an individual whose skills leave everyone charmed. His hands move flawlessly in fast and precise rituals. They interact with machines and materials as if to convince them to take stunning forms. The master does not suggest many books or guides but incites the apprentice to observe and glean the secrets of his art. Over time, the apprentice learns how to deal appropriately with the materials he has to handle. He loses the clumsy movements and duplicates those of the master. He becomes an artisan himself and experiments and develops new methods. As in craftsmanship, no book can teach entrepreneurs all the knowledge required to succeed. Theory provides a useful basis that must be refined through continuous practice.

Second, an artisan cannot mass-produce the products he creates. Everything is hand-made and requires significant time, care, and attention. By definition, there cannot be two perfectly identical products. He inevitably has to face a series of conditions that force him to adopt new solutions. Sometimes, raw materials differ, or customers have unique requests. An artisan has to prototype and experiment with new solutions continuously. He always has to find new and better ways to satisfy customers' needs in order to gain a competitive advantage. Similarly, entrepreneurs have to develop solutions that people will embrace. Everything must be designed according to the real problems and needs customers feel. Therefore, there cannot be two identical solutions for two different problems or contexts.

Third, craftsmanship imposes a continuous improvement in one's skills and products. Over time, an artisan may have to replace his old tools, learn new crafting techniques, and buy different raw materials. Entrepreneurs do the same thing. They need to adopt new approaches, methods and practices to realize the many ideas, projects, and ambitions they have in mind.

[7] Giampaolo Colletti developed the term "artigenio" (i.e., craftgenius) to define the new generation of resilient and highly competitive digital entrepreneurs currently flourishing in our country.

Italy has a huge entrepreneurial potential that must be released (Fusco, Spagnolo, & Pinna, 2017). We need to channel all these characteristics that are part of our DNA and adopt a flexible, dynamic, and iterative mindset for innovation.

At the moment, thousands are struggling to bring their new projects, ideas, and ambitions to life. Some attempts will become astounding accomplishments, while others will turn out to be smaller and more personal successes. Nevertheless, the vast majority of these attempts, and the people working on them, are steering towards a very diverse outcome: failure (Savoia, 2019).

The fear of failure is reasonable and well-founded (see Nielsen Company LLC, 2014), but it should not stop people from pursuing entrepreneurial activities: when the fear of failure bites them, they have to go hunting and bite back. Business Telling represents the perfect weapon to do this.

3. BUSINESS TELLING: A PROPOSED APPROACH TO GUIDE DIGITAL TRANSFORMATION

"*Progress is impossible without change, and those who cannot change their minds cannot change anything.*" (G.B. Shaw)

Innovation is about change. Entrepreneurs, businesses, and professionals must change and adapt if they wish to succeed.

Organizations move through the different stages of their business models' life cycles (Appelo, 2019). They are born, grow and – eventually – die, unless they reinvent themselves (Lichtenstein & Lyons, 2008). Companies are usually created because people have a clear vision: They glimpse the future and – with it – the opportunity to improve some aspects of the present world. However, this enhanced world of tomorrow quickly becomes the ordinary world of today (Duarte, 2013). The implication is clear: Organizations that reach maturity should not rest on their laurels; otherwise, they will start to crumble (Gumpert, 1983). To avoid this, they should change strategies, so that they can continue to be at the right place at the right time. However, moving in the direction of uncertainty – with unknown risks and rewards – is a real challenge that requires bravery, intuition, and flexibility. Yet, the best view comes only after the hardest climb.

As long as companies adopt only one business model[8], they are dealing with just one life cycle. However, when a company decides to implement new business models, it is like a family having children. The offspring must have its own lifecycle (Appelo, 2019) and cannot survive without a supportive ecosystem in which it could live. As a result, entrepreneurs and managers may be dealing with various businesses in diverse life cycles, that require particular practices, rules, and strategies depending on the context. In this vision, the organization becomes merely a legal and financial container (Appelo, 2019). In order to flourish, leaders must always begin with the question "*What problems do we have to solve?"* before jumping to a specific tool, practice, or management principle. They must learn to manage the never-ending switch between "*What is required now?"* and "*What do we have to do in order to achieve it?"* (Zawadi, 2019).

Innovation requires change.

[8] "A business model describes the rational of how an organization creates, delivers and capture value" (Osterwalder & Pigneur, 2010)

3.1 The main principles of Business Telling

The approaches, tools, and tactics explained in this thesis apply to all kinds of ideas in the digital era: those for new products[9] (or for new features and characteristics to be implemented in existing products), new services (or for novel offerings to support existing services), and new businesses or organizations of all types. Business Telling is designed to help people who have a big opportunity, problem, or idea and want to start in the right way. It encourages the practice of approaching the development of innovation according to the specific goals, needs, and problems that arise.

The following pages introduce the most significant guidelines that support it. They are organized into three groups of principles: those to guide innovation, team organization, and processes.

3.1.1 Principles to guide innovation

There are four main principles that are required to guide the development of innovation:

- Innovation requires management (Ries, 2011);
- Innovation requires change (Zawadi, 2019; Brand, Blosch, & Osmond, 2019);
- Innovation requires empathy (Brown & Katz, Change by design, 2011);
- Innovation requires humility (Fusco, Spagnolo, & Pinna, 2017).

Innovation requires management. The market is continually changing. Digital transformation, globalization, and technological advances are shifting the way organizations operate, interact, and compete. Product life cycles have shortened, and companies have to reinvent themselves if they wish to survive. In this context, innovation cannot be pursued with a "just do it*"* attitude. It requires a new management style that can guide it through its context of extreme uncertainty.

Innovation requires empathy. Traditionally, customers have been segmented based on their demographic characteristics. These include: age, gender, ethnicity, education, and income level, among other factors. However, demographics become almost useless when a company wants to design an innovative product or service (Appelo, 2019). It would be difficult for a team to identify the needs and desires of "married Italian males from 18 to 25," but much easier to empathize with "Liam" and "Marco." Empathy involves the ability to immerse oneself in the lives of other people and start solving problems from their perspective. Understanding the needs, desires, and aspirations of target customers and users allows team members to make better and more successful decisions.

[9] The term *product* refers to any source of value that a company is creating for people who become its customers.

Innovation requires humility. Perseverance is a common characteristic among managers and entrepreneurs. It describes the strive to move forward and tackle any obstacle that emerges. However, it may be a double-edged sword. Sometimes, this unshakable drive is what leads companies to success. In other cases, it represents a gigantic anvil that drags them into the abyss of failure. Entrepreneurs tend to fall in love with their ideas and arrogantly believe that they know what customers want and need. They impulsively commit to achieving their vision, but no amount of money, time, and effort can make the wrong solutions work. Uncertainty means that no one can be entirely sure of what is going to happen. Entrepreneurs must state and test their hypotheses, and they should plan future actions based on the evidence that they gather.

Innovation requires change. There is no single framework, approach, or technique able to tackle all the problems, obstacles, and needs that companies encounter during their life cycles. Business Telling emphasizes that people's approach to innovation should evolve with the company and adapt to the stages of product development. It represents a comprehensive philosophy that views innovation as the result of a dynamic, flexible, and iterative process.

3.1.2 Principles to guide team organization

There are three main principles to guide team organization (Rigby, Sutherland, & Takeuchi, 2016; Beck, et al., 2001; Gothelf & Seiden, 2016):

- Cross-functionality and cohesiveness;
- Small, dedicated, and collocated teams; and
- Self-sufficiency and empowerment.

Cross-functionality and cohesiveness. No one can do it alone. An Italian cartoon, called *Siamo fatti così*, illustrates the structures and internal functionalities of the human body, depicting them in an extremely simplistic way. Microscopic components are represented through anthropomorphic figures, each of which has its distinct appearance and tasks. For example, red blood cells are illustrated as round red figures that carry several transparent spheres (of oxygen) on their backs. Similarly, white blood cells are round white figures dressed like police officers. *Siamo fatti così* represents the perfect analogy to describe how a team should be: a group where different people work as one, each giving 110% to reach the same goal of ensuring that the company continues to live. Business Telling requires a strict collaboration between many disciplines. Heterogeneous teams can achieve unexpected and better solutions, because each problem is observed from several different perspectives.

Small, dedicated, and collocated teams. Teams should be small enough to foster communication, coordination, and camaraderie – with an ideal size of no more than nine (or ten) total core members. Entrepreneurs, intrapreneurs, and managers should dedicate themselves to one specific project and invite members to work in the same location. When teams are small, people are likely to know one another, simplifying interaction, information sharing, and evaluation of individual contributions. Additionally, by dedicating each team to a given project, members can focus on the same priorities and minimize dependencies on other teams.

Self-sufficiency and empowerment. Each team should have all the capabilities, authority, and tools that it needs to operate without external dependencies. It must have the freedom to understand how to solve the problems that it faces and to interact and communicate directly with customers. Teams that do not rely on external help can optimize their processes for maximum efficiency.

3.1.3 Principles to guide processes

There are three main principles to guide processes:

- Testing over believing (Savoia, 2019);
- Making over talking (Gothelf & Seiden, 2016); and
- Getting out of the building (Ries, 2011; Blank & Dorf, 2012).

Testing over believing. Reality is complex, dynamic, and unpredictable. Business Telling supports the idea that everything is a hypothesis until team members prove otherwise. Every project starts with a set of assumptions, which may or may not reflect the truth. Sometimes, they are easy to identify; other times, people do not recognize them until it is too late. To minimize risk, team members must define critical hypotheses and validate them as systematically and rigorously as they can.

Making over talking. Business Telling values *making* over endless analysis. It is more useful to create the first, unpolished sketch of an idea than to spend half a day debating its merits. The answer to the most complex problems that a team will encounter cannot be found in papers, existing market analyses, or conference rooms: It comes from customers. Team members have to make their ideas concrete – they have to create something that people can see, test, and evaluate. Instead of debating potential scenarios, they should concretize their thoughts and test these with a dose of market reality.

Getting out of the building. The success of a product or service does not depend on the perseverance, passion, and commitment of team members; it depends on customers and on whether

they decide to use it or not. Entrepreneurs need extensive and continuous contact with potential customers to understand whether their hypotheses reflect reality. After all, it is better to find out that ideas are not on target before we have spent massive resources creating a product that nobody wants.

3.2 Business Telling

Developing an innovative solution is just like working to create the perfect story. First, we have to decide who is going to read the tale that we want to tell. Diverse audiences respond to different metaphors, structures, and writing styles (Duarte, 2013). Subsequently, we have to complete the plot and test if someone might like it (Tracy, 2008). We measure the interest and try to understand the many reactions that the plot generates. Upon positive feedback, we write the story step by step and see if people continue to like it. If this is not the case, we change something and iterate. A watchful eye may have already noticed some similarities between business development and storytelling. However, there is something more to this analogy.

Ever since humans said their first words, stories have been told and sung (Duarte, 2013). They have created emotional connections, conveyed important information, and astonished countless people. Successful stories light sparks in people's hearts, igniting knowledge and bestowing the ability to withstand the passing of time (Duarte, 2013; Nihill, 2016). This means that, whether we want to create a thousand-year-old story or a craved innovation, the requirement is the same: to conquer the hearts of people.

Every company wants to thrive. To do so, it must enchant both customers and business partners. However, only few succeed in the task. Many organizations die even before having the opportunity to set this goal – especially startups (see Nielsen Company LLC, 2014).

As aspiring entrepreneurs, intrapreneurs, leaders, and creatives, we may have seen dozens of ideas end up in the same bucket. But were these ideas discarded because they were flawed? Did they fail in meeting customer and business goals? Or did the team simply run out of time, passion, or resources? In any case, they never reached phase two. Business Telling is a new approach that offers a combination of three different schools of thought to help individuals succeed in the innovation challenge. They include: Design Thinking, Lean Startup, and Agile Development (see Exhibit 3.1).

Exhibit 3.1 - Business Telling's three main ingredients

Design Thinking helps teams to broaden their perspectives and dive deep in the lives of customers. It relies on collaboration, iteration, and empathy as the core to problem solving. The aim is to explore and understand the present world. Lean Startup encourages entrepreneurs to judge their progress differently (Ries, 2011). Since (aspiring) entrepreneurs often end up creating something that nobody wants, it is irrelevant whether they do it on time or on a budget. The approach focuses on experimentation, rapid iteration of ideas, and evolutionary processes, with a goal of understanding how to build the right things as soon as possible (Ries, 2011; Maurya, 2012). Agile refocuses development on shorter cycles, regular delivery of value, and continuous learning. It seeks to get ideas to customers quickly, understand how these ideas are received, and iterate frequently (Beck, et al., 2001; Rigby, Sutherland, & Takeuchi, 2016; Cram & Newell, 2016). Making things helps a team to learn and grow, and it places something right in the hands of people. Without customer feedback, it is difficult to know if the solution is on target or how to evolve the idea.

The purpose is to let the reader overcome the fear of showing work in an unpolished or ugly state. Any first attempt will unavoidably require adjustment. Therefore, the sooner we get our ideas out into the world, the sooner we can figure out what those adjustments should be. Waiting too long for feedback is wasteful.

3.2.1.1 Focus: Design Thinking

Traditionally, designers have focused their efforts on optimizing the look and functionality of products (Wind & Mahajan, 2002). More recently, they have widened their approach, applying their principles not just to physical products, but also to consumer experience, as well as production and interaction processes (Brown & Wyatt, 2010). This is the birth of Design Thinking.

Design Thinking appeared in academia during the 1970s and was publicized by the American design firm IDEO in the early 2000s (Gothelf & Seiden, 2017). It represents an approach that builds on the way designers conceptualize their work to create new ideas that have emotional meaning as well as functionality. Tim Brown, the CEO of IDEO, describes Design Thinking as an "innovation powered by … direct observation of what people want and need in their lives and what they like or dislike about the way particular products are made, packed, marketed, sold and supported" (Brown, 2008). It represents "a discipline that uses the designer's sensibility and methods to match people's needs with what is technologically feasible and what a viable business strategy can convert into customer value and market opportunity" (Brown, 2008). Design Thinking is important, because it drives non-designers to adopt design techniques in order to approach the problems that they encounter. It pushes business people to work beyond their typical boundaries.

3.2.1.2 Focus: Lean Startup

Lean Startup gets its name from the lean manufacturing revolution (Ries, 2011). Lean thinking has fundamentally changed the way in which supply chains and production systems operate. Its main principles include: fostering the knowledge and creativity of individual workers, shrinking batch sizes, accelerating cycle times, implementing just-in-time production, and controlling inventory (Liker, 2005). It teaches the difference between value-creating activities and waste (Gothelf & Seiden, 2016).

Learn Startup adapts these ideas to the context of entrepreneurship, proposing that entrepreneurs should measure progress in terms of validated learning (Ries, 2011). It is based on the Build-Measure-Learn feedback loop to minimize project risk and nurture leaning through testing and iteration.

As Ries states, "Lean Startup initially advocates the creation of rapid prototypes designed to test market assumptions and uses customer feedback to evolve them much faster than via more traditional software engineering practices" (Ries, 2011). Lean Startup minimizes waste by "increasing the frequency of contact with real customers, therefore testing and avoiding incorrect market assumptions as early as possible" (Ries, 2011).

3.2.1.3 Focus: Agile Development

In 2001, seventeen process methodologists met in Snowbird, Utah to share opinions about the future of software development (Rigby, Sutherland, & Takeuchi, 2016). Their idea was to evolve the conventional waterfall approach, where requirements and execution plans are formulated ex-

ante and then passed sequentially from function to function. While the approach was effective for companies operating in stable and predictable environments, problems emerged when software markets started to evolve rapidly and unpredictably. In this context, product specifications risked being obsolete by the time companies released the software to the public, and developers felt hampered by bureaucracy (Rigby, Sutherland, & Takeuchi, 2016).

The process methodologists suggested four new core values for creating software, defined principles to favor the implementation of those values, and named their stance the *Agile Manifesto*. Today, development frameworks that adhere to these values and principles are part of the agile techniques.

Their manifesto is as follows (Beck, et al., 2001; Rigby, Sutherland, & Takeuchi, 2016):

1. *"People over processes and tools"*. Management should organize processes around motivated people and give them all the support and authority that they require to complete the job. Team members should establish an open and creative environment for problem-solving, communicate face-to-face, and continually suggest new ways to improve their work.

1. *"Respond to change rather than following a plan"*. Many predictions and plans are almost useless in dynamic and unpredictable environments (Rigby, Sutherland, & Takeuchi, 2016). Teams should organize in detail only those activities that will not change before execution. People should be happy to learn things that alter their direction, even late in the development process. This will bring them closer to the customer and yield better results.

2. *"Working software over comprehensive documentation"*. Prototyping speed up the process of innovation. Developers who can test their products in real market conditions will learn faster and create more valuable work. Teams should experiment with small parts of the product to determine whether customers like them; if the latter do not, they should move on to the next feature.

3. *"Customer collaboration over contract negotiation"*. Product specifications should continually change based on the information that team members gather during the development process. Fast prototyping, frequent market tests, and constant collaboration with customers or end-users help team members to create valuable products.

3.3 The five streams of innovation development

Innovation requires change. Business Telling prompts managers and entrepreneurs to ask themselves: "*What problem do we have to solve?"* before adopting a given practice or framework. It supports a developmental mindset, based on the idea that people's approach to innovation should evolve with the company and its business model: The "what" and "how*"* must be tailored to the context and the goal that a company wants to achieve.

Business Telling offers innovation-seekers a ship that they can take to reach an island (i.e., innovation). Its different approaches and practices are the sailors, each focused on a given task. In our case, "Design thinking specializes in discovering the needs of customers by empathizing with them, understanding their desires, frustrations and motivations, and generating ideas for better solutions" (Appelo, 2019). Lean Startup shines in testing the generated ideas according to the simplest possible way and validating whether a given solution works to solve a problem. Agile reduces cycle times, fosters continuous learning, and delivers customer value regularly. Innovation is the result of a vortex (see Exhibit 3.2), in which five streams swirl together in an iterative, flexible, and dynamic model:

> The *explore* stream is about finding out as much information as possible about potential customers and users. Entrepreneurs must dive deep into the lives of (potential) customers, understand their context, and feel their needs through their first-hand experience. By empathizing with people, they test their assumptions and gain genuine customer insights. The ideal result of this stream is a large and unstructured pile of findings with both emotional and factual content. In the Lean startup (or Customer Development) terminology, this is often referred to as "getting out of the building" (Ries, 2011; Blank & Dorf, 2012).
>
> In the *ideate* stream, team members first share, process, and analyze all the information that they have gathered. The aim is to determine customers' jobs to be done and obtain a human-centered definition of the core problems that must be solved. The stream then involves the

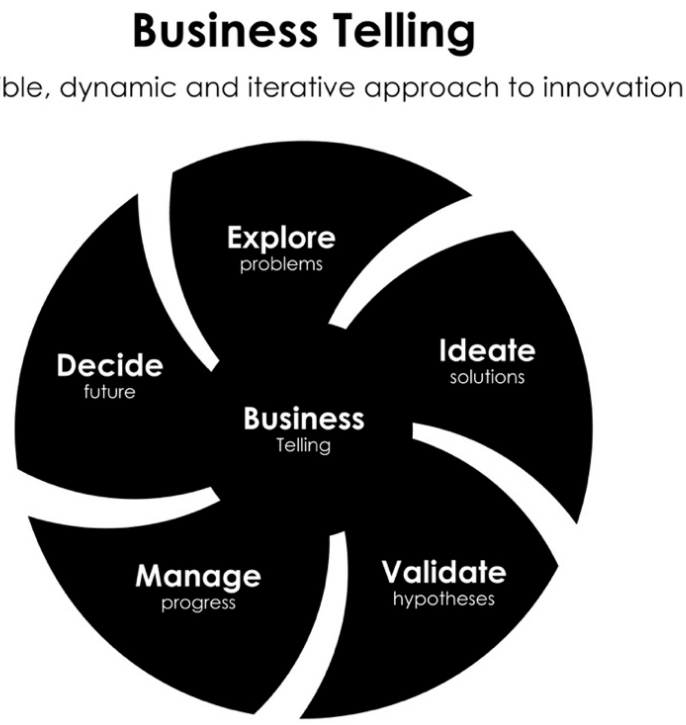

Exhibit 3.2 - Business Telling's streams

generation of many ideas to solve the problem that the team members identified. The result is a sketched hypothesis for a solution that can be evaluated and tested.

In the *validate* stream, team members create something to place in the hands of customers. The goal is to validate the problem and solution as efficiently and rapidly as possible using feedback. Teams build pretotypes and agile prototypes, which could give them fresh first-hand market data. Experiments do not have to be flawless; they may not even result in a product. What is needed is merely an approximation of the end experience.

Manage represents the fourth stream of Business Telling. Team members gather data and information about the effectiveness of the products they created and use the newfound knowledge to evolve their idea. Data must be analyzed and interpreted rigorously and objectively. The challenge is to assess whether product development efforts are leading to real progress.

In the *decide* stream, team members decide what to do with everything they learned. They confront the most challenging question entrepreneurs have to face: whether to pivot the original strategy or persevere (Ries, 2011). If team members are making good progress toward achieving the vision, that means they are learning properly and using the new

knowledge efficiently. In this case, it is reasonable to persevere. If not, the strategy is flawed and requires an urgent change. When team members decide to pivot, they jump back to a previous flow of the Business Telling vortex to establish a new baseline.

3.4 Testing the validity of Business Telling in Business Games

Business Telling supports a developmental approach to innovation. It presents entrepreneurs, intrapreneurs, and innovation managers with a mindset designed to help them overcome important challenges. However, there are limited opportunities to test it, and business professionals and experts could only offer theoretical support. Companies are reluctant to change their way of doing business without facts and figures to prove the effectiveness of the new approach. In Steve Blank's words, I had to "get out of the building" and test it myself (Blank & Dorf, 2012). Hence, I decided to participate in two different Business Games: Sant' Anna Business Game 2019 (Pisa) and MIP Business Game 2019 (Milan).

Business Games are international competitions that draw university students from all over the world. Over the course of two days, they have to solve between three to five business challenges submitted by diverse organizations (usually multinational enterprises). Days are structured as follows: The event starts in the morning. Every challenge begins with managers presenting a company, its vision and values, and a given problem that it is facing – or an opportunity that it has identified. Each student is then randomly assigned to a team, and he or she has to work with the other team members to design the perfect solution. The time allocated is up in three hours.
The experiment was a success. By adopting the Business Telling logic in every challenge, I managed to come in second place four times and third place twice. The table below shows a brief summary of the challenges.

Business Game	Company	Challenge	Award
SABG	Generali Assicurazioni	Design a new insurance service that can exploit 5G technology.	3rd
SABG	IBM	Choose an industry, find a problem, and create a virtual assistant to solve it using IBM Watson technology.	2nd
SABG	Luxottica	Design an employer branding strategy able to attract young talents.	2nd

MIPBG	BNP Paribas	Create the bank of the future.	2nd
MIPBG	Luxottica	Enhance the current "smart shopper" experience to attract more visitors inside physical stores.	2nd
MIPBG	Reply	Analyze large volumes of data, develop reasonable assumptions, and help a company choose the most profitable strategy.	3rd
Exhibit 3.3 – Challenges and awards in International Business Games			

Luxottica Business Challenge

Luxottica is a leading firm in the design, manufacturing, and distribution of fashion, luxury, and sports eyewear. The portfolio includes iconic proprietary brands such as Ray-Ban, Oakley, and Vogue Eyewear, as well as important licensed brands including Ferrari, Michael Kors, and Prada. Luxottica's long-term strategy is to "continue expand in the eyewear and eyecare sectors by growing its various businesses, whether organically or through acquisitions" (Luxottica, 2018). The challenge that the company proposed during the Business Game was to design a project to strengthen the employer branding reputation of the company. Our solution *"Unlook your Future –*

Exhibit 3.3 - SABG - Luxottica Business Challenge. *Unlook your Future*: *Uncover the mind behind the set*.

Discover the mind behind the set" came in second place. After the award ceremony, Silvia Zanatta (group employer brand communication manager at Luxottica) was so enthusiastic about how we structured the project that she invited us to present it before several top managers in their Milan headquarters.

BNP Paribas Business Challenge

BNP Paribas represents a leading bank in the Eurozone. The group focuses its activities in the following key operational divisions: domestic markets, international financial services, and corporate and institutional banking for large corporate and institutional investors. Additionally, it is currently "implementing its 2017–2020 plan (Ambition 2020) with the rollout of new customer experiences, automation and improvements in operational efficiency" (BNP Paribas, 2018).

The challenge issued by Matteo Ottaviani (head of transformation and innovation hub at BNL) was extremely demanding, and there were no budget constraints or precise indications. All we had to do was to *create the bank of the future* in just three hours. Again, Business Telling proved to be effective. It helped the team to empathize with the target market, determine the cheapest way to test and validate the solution, and structure a simple and clear implementation roadmap. We were once again awarded with the second place.

Exhibit 3.5 - MIBG - BNP Paribas Business Challenge. *A big sister that grows with you*.

IBM Business Challenge

The challenge that IBM proposed was very different from the others. Essentially, we had one month to develop a fully operational virtual assistant using the Watson technology. First, we analyzed various markets and empathized with customers in order to identify the most profitable opportunities. Then, we set a long-term goal and started to test our key assumptions through a simple pretotype. As soon as we verified people's interest in our solution, we started developing the virtual assistant following the lean startup and agile methodologies. Interestingly, although we were among the teams with the least number of software developers, IBM rewarded us with the second place.

Exhibit 3.4 - SABG - IBM Business Challenge. *Ambrogio: Feel the taste of a story*.

4. EXPLORE AND IDEATE

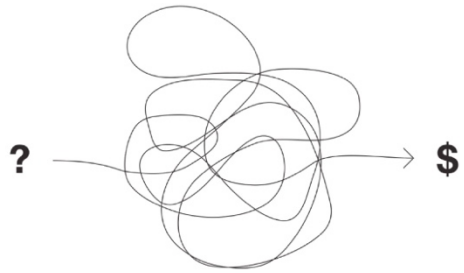

Exhibit 4.1 - "Design Process" after Tim Brennan Source: Dubberly (2004)

Innovation requires design (Brown, 2008; Brown & Katz, 2011), but how can we define the latter? Tim Brennan of Apple's Creative Services drew the picture above (Exhibit 4.1; Dubberly, 2004). The concept is clear. Design is simply magic: "It is an utter enigma, a mysterious no-man's-land where only the brave (and the brilliant) dare tread" (Liedtka & Ogilvie, 2011). It mocks any belief that a safe map could exist for sailing these rough waters. Undoubtedly, we would all love to create the equivalent of the iPhone in our businesses. However, mere mortals, especially business types, are unprepared when they need to release that kind of creativity, innovation, and growth (Liedtka & Ogilvie, 2011). Like a goldfish that has jumped out of its fishbowl, chaos, uncertainty, and the unknown become all that we see. Thus, we give up and go back to our conventional tools in the search for the next holy grail and the discovery of the new catalyst for growth.

We should not be discouraged by Apple's view. Design may have many different meanings. Apparently, Design Thinking is more similar to Dorothy's ruby slippers than a magic wand. Everyone already has the potential; we just need to learn how to sharpen it.

Design thinking is a human-centered approach to problem solving, which starts with people and ends with innovative solutions tailored to their needs (Brown & Wyatt, 2010). It is built on the belief that anybody can approach the world as a designer does, and it does not require supernatural powers; what is needed is just some creativity. Creativity is not the ability to draw beautiful paintings or sculpt the Eiffel Tower out of marble, but rather, it is "a way of understanding the world" (Kelley & Kelley, 2013). Anyone can come up with a creative solution to problems. Often, all it takes to unlock the potential as a dynamic problem solver is "rolling up our sleeves and diving in" (Kelley & Kelley, 2013).

This type of design is absolutely safe to try at home.

4.1.1 Definition of success

Traditionally, business projects have been framed by requirements, structures, and deliverables (Gothelf & Seiden, 2016). People are given specific requirements to satisfy, not-so-flexible processes to follow, and they are expected to deliver descriptions of how the solution that satisfies those requirements will look and perform. In many cases, the strategic context for these requirements fails to be communicated, available, or considered (Gothelf & Seiden, 2016). Design Thinking radically shifts the way we structure work by understanding the environment in which the solution must be built and, more importantly, how the entire team defines success (IDEO, 2015). The goal is not to create a product or a service, but rather to positively affect customer behavior and foster change in the world (Brown, 2008).

Why should the focus be on people's outcomes? It is difficult to foresee whether the solution that we design will achieve both the strategic and the tactical value that we want to create (Savoia, 2019). *Will this platform increase employee engagement? Will customers use the product in ways that we did not predict? Will we successfully attract visitors in the way that we anticipate?* Uncertainty makes everything riskier and more difficult. In such a situation, there is only one truth: The solution will be used by humans. People "hire it to perform a job" (Noble, 2011), which may or may not be the one that we designed it for (Christensen, Cook, & Hall, 2016). Thus, rather than focusing on deliverables or strict strategies, it is better to focus on people and the outcomes that they want to achieve (Gothelf & Seiden, 2016).

This perspective requires a culture of humility and empathy (Fusco, Spagnolo, & Pinna, 2017). It requires managers and teams to use their skills, knowledge, and creativity as scientists: They must propose the best solutions and test these to see if they are right.

4.1.2 Who should start from the "explore" flow?

The *explore* and *ideate* streams offer a problem-solving framework inspired by Design Sprint (Knapp, Zeratsky, & Kowitz, 2016)[10]. The term refers to the ideas explained in the book *Sprint* by Jake Knapp, John Zeratsky, and Kowitz. The authors describe Design Sprint as a way to gather all the key stakeholders and make them work together on a new project or initiative. Over five days, team members brainstorm, iterate, and finish the week with a testable prototype (Knapp, Zeratsky, & Kowitz, 2016). The approach is useful in bringing together a cross-functional and heterogeneous

[10] Design Sprint represents a five-day process for answering critical questions in Google. It is a variation of the Design Thinking framework proposed by the American firm IDEO.

team of colleagues; revealing assumptions, opinions, and doubts about relevant business problems; and injecting those opinions in the context of market reality. The ideal result is a solution based on a set of hypotheses that people must continue to validate throughout the project life cycle.

The *explore* stream is designed for everyone who has a grand opportunity, problem, or idea and needs to get started. It represents a suggested kickoff for projects that will hopefully last for months or even years (Knapp, Zeratsky, & Kowitz, 2016). This framework requires much time, energy, and unshakable focus. The more significant the challenge and motivated the team, the better the beginning will be (Cruchon, 2020).

4.2 Explore

"Designing a product without an audience (customer) in mind is just like writing a love letter and addressing it to whoever is interested" (Saffer, 2007).

The best advice in storytelling is to know the audience who will read or listen to the story. Even if the goal is to create a given emotion, stories may require diverse structures, metaphors, and writing styles, depending on who is listening (Duarte, 2013). Men or women, children or adults, students or professors – every audience has its specific preferences, needs, and desires. In business development, customers represent our audience.

Imagine a zoo where zookeepers do not know a single thing about animals. They do not worry about their habitats or their needs. They simply place them all in a single cage and feed them with anything they have on hand. Think about all the chaos that would break out. Admittedly, this is not a place where people would love to take their children. The analogy applies to business development as well. When a company is trying to conquer the market through innovative products or services, the concept is the same. It is not about what the managers or founders think and want. Any project that wishes to overcome the market test must be customer-centered (Deshpande, 2014). Otherwise, the company may find itself producing a product that no one other than the employees or team members will buy.

Customers react harshly to anything that is not designed according to what they want or need (Savoia, 2019). Negative word of mouth and mean reviews may be deadly (East, Hammond, & Lomax, 2008), especially at the beginning. Managers, founders, and project owners should not think of themselves as the heroes who will save the company in any circumstance, because they

cannot. Customers are the only ones who will determine the outcome of the project. Therefore, it is crucial to know and understand them fully since the beginning.

4.2.1 The risk of persevering too much

Perseverance is a common characteristic among entrepreneurs. It describes the strive to move forward and tackle any obstacle that emerges: a blind commitment toward a product or vision. However, it may be a double-edged sword. Sometimes, this unshakable drive is what leads companies to success. In other cases, it represents a gigantic anvil that drags them into the abyss of failure (Fusco, Spagnolo, & Pinna, 2017).

In *Business Design Per Le PMI,* the authors tell a story about a passionate entrepreneur and his idea (Fusco, Spagnolo, & Pinna, 2017). The entrepreneur wanted to bring the TV industry to a higher level by offering astonishing products to customers with ample spending capabilities. His passion and commitment were contagious, and he managed to pass down the vision to colleagues and investors. A team of highly specialized engineers was soon created, and everyone quickly immersed in the project soul and body. As expected, design and development required careful planning and enormous resources. After a few months, the prototype was ready. The result could not be more impressive, as it stumped everybody – well, almost everybody. The entrepreneur was quite dissatisfied; he was sure that there was still some room for improvement. Everybody resumed work. The second prototype was even more astonishing than the first, and the team managed to install some features that were almost inconceivable at the time. However, a new technology had just come out. How could such an innovative product not include it? Thus, the team had to go back to product development in order to integrate these features. Finally, the TV was almost ready. I say "almost," because our entrepreneur thought that the design would have needed some adjustments. He was sure that the team had the skills to create a truly astonishing product. However, when the design was finally perfect, another new technology was just released.

This story evokes the paradox of Achilles and the Tortoise. Just as Achilles will never manage to catch up with the tortoise, the entrepreneur will launch his product only when it reaches technological perfection. However, as the team works, technology advances and becomes out of reach: Perfection will never be achieved, and the product will never be launched.

The futuristic TV did not go far; the company failed just one year after its announcement (Fusco, Spagnolo, & Pinna, 2017).

There is a problem hidden within the story. The entrepreneur was correct in his desire to astonish the market with an innovative product. Nevertheless, something was missing. The entrepreneur wanted to surprise people with his TV, but he did not even consider the idea of including those people in the designing process. The product was born from his mind; it had the technical features that he decided, and it depended on the available technologies. What if the customer desired different features? What if the customer felt that the product was too expensive? What if the customer was happier with a not-so-perfect product?
These questions will never be answered, as the project tried to fulfill the entrepreneur's unattainable desire over the customer's real need.

The following tools and practices are designed to prevent such an ending. It is crucial to note that Business Telling is a mindset; it does not represent a set of practices that must be followed in any case. Every activity can – and should – be adapted to the characteristics and requirements of the project.

4.2.2 Set a vision

"Houston, we've had a problem" (Lovell & Kluger, 2006). Everyone knows the story of Apollo 13: Intrepid astronauts head to the moon, but an explosion on the spacecraft prevented them from landing. Every family had their TVs on to follow the nail-biting return to Earth.
In the 1995 movie version, the team at Mission Control gathers around a blackboard to form a plan. Gene Kranz, the flight director, wears a grim expression on his face. He grabs a piece of chalk; listens to the ideas, concerns, and opinions of each member; and draws a simple diagram. It is a map that shows the path of the damaged spacecraft, extending from outer space, around the moon, and (hopefully) back home. The goal is clear: "To get the astronauts home safely, Mission Control has to keep them alive and on the right course for every minute of that journey" (Knapp, Zeratsky, & Kowitz, 2016).
Throughout the film, Kranz uses this sketch to keep team members focused on the correct problems, step by step. First, they adjust the spacecraft's course to ensure that it follows the chosen path. Next, they replace the air filter so that people can breathe. Only after solving those problems do they commit themselves to a safe landing.
People are eager to solve a crucial problem as soon as it is spotted. There never seems to be enough time, the adrenalin starts to pump, and solutions keep popping up. However, without a precise plan and a clear goal in mind, team members could end up wasting their time and energy solving the wrong parts of the problem (Knapp, Zeratsky, & Kowitz, 2016). If Mission Control had worried

about the safe landing first, astronauts might have run out of oxygen even before approaching Earth. Instead, NASA defined its priorities before working on solutions and managed to get them home safely.

4.2.2.1 Start at the end

Entrepreneurs are visionaries (Barringer & Ireland, 2015). They envision things that do not yet exist and want them to become real. Problem setting begins with an activity called "*start at the end"*: a glimpse to the future world, the end of product development, and beyond. The team will engrave a project's vision. Starting at the end is like being handed the DeLorean's keys: If we could skip to the future, what would we see? Even if tomorrow may seem obvious, it is vital to define it and write it down.

Entrepreneurs, intrapreneurs, and innovation leaders need a grand vision (Caneque & Hart, 2017). It helps them to define the hearth of an innovative product: what it aims to generate in its customers and end-users. A great vision allows people to assert and visualize the value that should be created and delivered (Appelo, 2019). In this way, everyone is on the same wavelength with regards to the direction of the team's developmental efforts. In Jurgen Appelo's own words:

Don't confuse a Product Vision with a strategic plan. Sharing a dream with your team is not about a list of features on a Product Roadmap … A vision is not the slogan on a mug filled with cappuccino that was excreted from a push-button machine. Instead, your vision is a verbal image of the future, in language that you would use when you told your story in a bar, to convince your friends to help you make things happen (Appelo, 2019).

To start the discussion, the entrepreneur (or project leader) should ask his or her team members the following questions: *"*Why are we conducting this project? Where do we want to be in three months, six months, or even a few years from now?" (Knapp, Zeratsky, & Kowitz, 2016). A vision is a glimpse of the future; it should explain the team's ambitious long-term goal (Caneque & Hart, 2017). Members should not be worried about overreaching. The next activities help them to start and make real progress towards even the most meaningful goal.

The story of The Ocean Cleanup provides a great example of an inspiring mission. In 2010, 16-year-old Boyan Slat was traveling in Greece. Scuba diving was his passion. However, when he tried to dive, there was more plastic in the sea than there were fish. What surprised him even more was that no one had made any serious attempt to solve the issue. The question "*Why don't we just clean it up?"* came up to his mind. Several years later, he started The Ocean Cleanup, a non-profit

organization, to clean up to half of the Great Pacific Garbage Patch in five years. (The Ocean Cleanup, 2019).

Sometimes, setting a vision is a straightforward process. Conversations are smooth, and people instantly agree with each other. In other cases, team members may not agree, or there may be a lack of clarity about the project. Nevertheless, it is crucial to persevere. Companies must establish their vision and communicate it consistently and persistently (Caneque & Hart, 2017). This shared knowledge can foster creativity, collaboration, and commitment among team members (Knapp, Zeratsky, & Kowitz, 2016).

4.2.3 Map the customer experience

Journey mapping involves the portrayal of a (potential) customer's experience as he or she interacts with a company when receiving its products or services (Liedtka & Ogilvie, 2011). The map can illustrate the actual or ideal journey and should include all the main steps required for the customer to move from beginning to end (Knapp, Zeratsky, & Kowitz, 2016).

The process helps team members to shift their attention onto customers' current experience rather than onto products or the organization itself. Additionally, it allows them to define and group the differences among customers. Journey mapping is a practical activity to shift people's focus from "What do we want?" or "What does the company want?" to "What is the customer trying to do?". In his book *Sprint,* Jake Knapp offers five pieces of advice for completing the map in the best way:

1. List the actors: They include all the essential characters that appear in the story. They may consist of different types of customers, key partners, and suppliers;
2. Write the ending: Sometimes people find it easier to figure out the end before the middle of the story;
3. Use words and arrows in between: The map must be functional and easy to understand;
4. Keep it simple: The map should have between five and fifteen steps. If the number exceeds twenty, it is likely to be too complicated;
5. Ask for help: All the team members should contribute to the work.

4.2.4 Validate current knowledge

Traditionally, target customers are defined according to their demographic characteristics. These include age, gender, ethnicity, education, and income level, among others. Such market segmentation may be useful when a company needs to select the distribution channels for traditional advertising. Nevertheless, demographics become almost useless when we want to design

an innovative product or service (Appelo, 2019). If an entrepreneur's objective is to create a successful product for people, he or she needs to understand those people (Brown & Katz, Change by design, 2011). Many companies invest large amounts in market research, "yet, often wind up neglecting customer perspective when designing products, services, and business models" (Osterwalder & Pigneur, 2010). People usually feel over-confident regarding their quantitative and theoretical findings. However, a trap may be hidden beneath their feet.

Consider the following passage from *Alice's Adventures in Wonderland*:

Alice was beginning to get very tired of sitting by her sister on the bank, and of having nothing to do … when suddenly a white rabbit with pink eyes ran close by her … Burning with curiosity, she ran across the field after it, and was joust about to see it pop down a large rabbit hole on the edge. In another moment, down went Alice after it, never once considering how in the world she was to get out again. … She found herself in a long, low hall … There were doors all around, but they were all locked. … Suddenly, she came upon a little three-legged table … there was nothing on it, but a tiny golden key (Caroll, 2011). *That key could open only a little door, about fifteen inches high. Too small for her. She was curious; she had to reach that beautiful garden beyond. Alice had wished to shut up like a telescope when she casually found the DRINK ME potion* (Caroll, 2011).

The story provides an example of a problem-solving product: a product supremely suited to satisfy a given need (*Oh, do you have this problem? What a coincidence! I got something right for you).* Of course, before starting to produce the potion, we must know that the room will inevitably cause that problem. Such a product requires in depth analysis of the context and many assumptions. Subsequently, we can come up with the right solution at the right time. Sometimes, however, this may not be enough: We may have found a suitable product, but, if we do not truly understand our customers, the business is bound to fail. Alice is just a girl; she is hasty and gulps down the potion before picking up the key on the table. As a result, the perfectly suited product becomes useless.

4.2.4.1 The importance of understanding customers

Innovation requires empathy. Emi Kolawole, founder and CEO of Dexign LLC, defines empathy as "the capacity to step into other people's shoes, to understand their lives, and start solving problems from their perspective" (Kolawole, 2015). Empathy offers a chance to dive into something completely different from what we are used to. It represents the bedrock of human-centered design, based on the idea that the "people we are designing for are our roadmap to innovative solutions" (Kolawole, 2015). In order to have an authentic human-centered design, we need to empathize, understand the people whom we are designing for, and bring them along into

the design process: Where do they live? How do they live? What do they do to spend their time? What are their aspirations and why? This means approaching customers as real people with real lives and problems, "not seeing them as targets for sales or as a set of demographic characteristics" (Liedtka & Ogilvie, 2011). There is no better way to grasp the context and complexity of their lives, feel their needs, and keep them grounded in the center of our work. Empathy validates our knowledge.

Harvard Business School professor Clayton Christensen told a story to explain the importance of understanding customers (Christensen, Cook, & Hall, 2016). Some years ago, there was a fast-food restaurant that wanted to increase the sales of its milkshakes. Marketers first defined the market by product category. They then segmented it by analyzing the characteristics of customers who frequently bought milkshakes, so they could have a profile of those who were most likely to buy that product. Next, they invited these people to their offices. The marketers wanted to assess whether making the shakes more concentrated, sweeter, or more affordable would serve them better. The feedback was excellent. However, the consequent improvements had almost no impact on sales.

A new researcher decided to join the study. He spent a long day in the restaurant, carefully observing everything that happened. He wanted to understand why customers were buying milkshakes, and he recorded everything: "when each milkshake was bought, what other products the customers purchased, whether these consumers were alone or with a group, whether they consumed the shake on the premises or drove off with it" (Christensen, Cook, & Hall, 2016), and so on. He found that 40% of all milkshakes were bought in the early morning, and the customers were usually alone. They did not purchase anything else and consumed the product in their cars.

The next morning, the researcher came back to the restaurant and interviewed the morning customers as they left, each with a milkshake in hand. He wanted to understand what caused them to buy that product. He asked them: "Excuse me, could you tell me what job you were trying to get done when you came here to hire this milkshake?" Most answers were similar; the customers had to face a long, tedious commute and wanted something to brighten the journey. They were not hungry but knew that they would be by mid-morning, and they needed something that would suppress hunger until midday. They also faced some constraints. They were always wearing work clothes and in a hurry, and they only had one free hand.

His follow-up question was: "Could you tell me about a time when you were in the same situation, but you didn't buy a milkshake. What did you buy instead?" (Christensen, Cook, & Hall, 2016)

Sometimes, the customers bought a bagel, but those were too dry. Additionally, bagels often resulted in sticky fingers and gooey steering wheels. Occasionally, these people also bought a banana, but it did not last long enough to solve the boring-commute problem. Doughnuts led people to starve before midday. Therefore, "the milkshake did the job better than any of these competitors" (Christensen, Cook, & Hall, 2016). It took people 20 minutes to sip it through the thin straw, solving the boring-commute problem, and they could easily consume it with one hand. By mid-morning, they felt less hungry than when they tried other products.

In the end, it did not matter much whether the shakes were healthier, cheaper, or chunkier. People did not buy those products because of such proprieties; they had completely different needs. In other words, entrepreneurs must understand the desires, motivations and goals of the target customers to design the right solutions. They must determine whether their current knowledge reflects reality, whether individuals act in the way they depicted in the Journey Map, and – if not – make the appropriate changes.

4.2.4.2 Create empathy: Interviews

It is incredible how much we can learn by asking people (Saffer, 2007). Survey, interviews and focus groups can offer reliable insights about (potential) customers' lives.

Conducting interviews that provide relevant feedback is an art (Osterwalder, Pigneur, Bernarda, & Smith, 2014). The goal is to listen, learn, and understand, not to inform, impress, or convince people of anything (Saffer, 2007). That is why every interview should follow a predetermined structure. Preparation is the key to obtaining useful insights.

> *Presentation*. The interviewer should present himself or herself, explain the reason for the interview, and ask permission to record it. If possible, the interview should be held in places where people are comfortable. The interviewee must feel important and understand that his or her knowledge and experience are valuable to the team.
>
> *Beginning*. The interviewer should start by asking broader questions about the main topic. He or she should listen to the answer with a fresh pair of ears and avoid any interpretation. Sentences must be written down exactly as the interviewee says them. Follow-up questions should then be made to understand and clarify the problem.
>
> *Story*. The interviewer should search for a recent event that the respondent remembers well. The aim is to make the interviewee empathize with the issue. It is possible that some

problems may not emerge at all, and it is important not to push for given answers. The interviewer should continue to build trust by stating how every insight is useful and relevant.

Grand Tour. Once trust is built and the respondent is at ease, the interviewer can steer towards relevant topics. He or she should keep a watchful eye for every detail, including the interviewee's emotions.

Summary. The interviewer should express his or her gratitude towards the interviewee. Relevant knowledge has been obtained, and it is vital to communicate this. A brief summary is done. The interviewee may add some information, report inconsistencies, and underline the main topics.

Interviews provide an excellent starting point for gaining customer insights (Ulwick, 2002). However, they do not produce enough or sufficient reliable information to make critical decisions (Bland & Osterwalder, 2019). Just as a good journalist does further research to find the real story behind what people report, team members should complement their interviews with other research. Customers might say one thing but behave differently in reality (Savoia, 2011). They may not know that they want something until they see it. Real-world observations of customers can offer real data and validate the findings (Lewrick, Link, & Leifer, 2018).

4.2.4.3 Create empathy: Ethnographic research

There is no better way to understand the hopes, desires, fears, and aspirations of people than by talking with them. "Facts exist only outside the building" (Blank & Dorf, 2012), and that is where entrepreneurs need to go. They should play the part of anthropologists.

Anthropologists dive deep into (potential) customers' worlds to obtain insights about their jobs, needs, and problems. The reason is apparent: "What customers do on a daily basis in their real settings may be different from what they think they do, or from what they would tell in surveys, interviews and focus groups" (Osterwalder, Pigneur, Bernarda, & Smith, 2014).

Personal contact and proximity with potential customers represent essential components of empathy (Lewrick, Link, & Leifer, 2018). It is impossible to know the lifestyles of all those whom we are designing the solution for. If we do not grasp their daily lives, all the decisions that we make will be based on shaky hypotheses. Without evidence to confirm those beliefs, they are all assumptions filled with risk. Therefore, validation is required.

Ethnographic research includes direct observations, diary studies, video recordings, and photography. In general, the decision regarding which method to adopt depends on the business (Osterwalder, Pigneur, Bernarda, & Smith, 2014). In business to consumer contexts (B2C), entrepreneurs can use three diverse practices. First, team members can stay at the house of a (potential) customer for several days and live with the family. Second, they can visit a store where (potential) customers shop and observe people for several hours – the story told by Christensen recounts the victorious deeds of a researcher who adopted this strategy. Third, team members can become the shadow of a (potential) customer and follow him or her for a day. The information must be well documented; everything must be written down, synthesized, and learned. In business to business contexts (B2B), it would be useful to spend time with (or alongside) a (potential) customer as he or she works.

4.2.4.4 Create empathy: Personas

Personas are fictional characters that we can create to sketch desires, motivations, and limitations of different types of people who are going to buy or use the solution (Lewrick, Link, & Leifer, 2018). They help the team to empathize with the different client profiles that it might find on the market. Thanks to this process, team members can go "beyond a customer's demographic characteristics and develop a better understanding of environment, behavior, concerns, and aspiration" (Osterwalder & Pigneur, 2010). Ultimately, they will understand if customers are truly willing to open their wallets and buy the product.

There are several techniques for creating personas. It is essential to imagine the typical customer as a real person (Osterwalder, Pigneur, Bernarda, & Smith, 2014). People have lived different experiences; they have carriers, personal interests, and professional goals. The aim is to unearth the real needs that they desire to satisfy and the goals that they want to achieve. Potential customers are often roughly sketched according to the knowledge and experiences of team members. The process might begin with several unvalidated hypotheses about people. The resulting personas and assumptions are then tested to ascertain whether they reflect reality. Interviews, surveys, field studies, and ethnographic research may demonstrate that customers feel and act differently than imagined. Thus, adjustments are needed.

Countless maps can be used to foster team creativity and stimulate individual contribution. Examples include the Empathy Map by XPLANE (see Exhibit 4.2) and the Lean Persona Template. Regardless, visual maps are just tools, not the solutions themselves. They can be more or less

effective, based on the awareness, knowledge, and passion with which they are used (Fusco, 2019). The choice of which canvas to adopt depends on both the context and on personal preferences.

Design Thinking requires empathy (IDEO, 2015), and personas represent an effective way to fulfil this requirement (Lewrick, Link, & Leifer, 2018). The conditions are open-mindedness, commitment, and attention to detail.

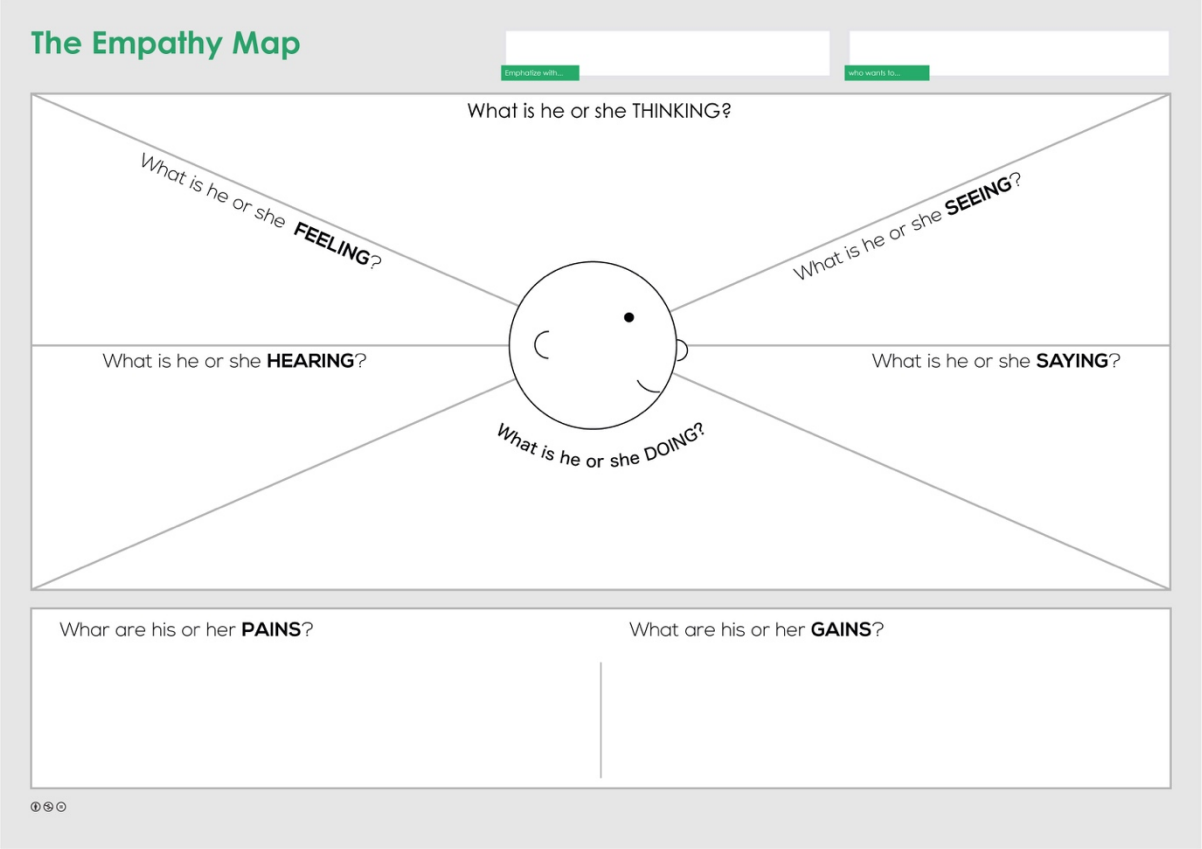

Exhibit 4.2 - The Empathy Map by XPLANE (revised version)

4.2.5 Pick a target

The problem-setting phase finishes with the decision of the main customer segment that the team wants to serve, and the activity (or step) in the Journey Map that members want to address (Knapp, Zeratsky, & Kowitz, 2016). The project owner should make the final decision after hearing everyone's ideas, concerns, and thoughts. Clarity in communication is essential at this point. The team should have no doubts with regards to the goal and whom the solution should be designed for.

The *explore* stream describes the importance of mapping and understanding the present – activities which are best done as a group exercise. All disciplines must be presented, including any subject

matter that could contribute vital knowledge to the project. By working together in a cross-functional activity, we are raising the problem-solving abilities of the entire team (Gothelf & Seiden, 2016). Team members can both voice their opinions and concerns and hear the perspectives of others. Here is where sticky notes and visual maps come into play: They offer a standard, more intuitive, and more visual language. They stimulate participants to exchange ideas, communicate, and – most importantly – innovate.

4.3 Ideate

The *explore* stream expresses the importance of mapping and understanding the present. It helps the team define the challenge to tackle and choose the primary customer segment to satisfy. The *ideate* stream stimulates creativity and fosters the creation of several ideas. Each person processes all the relevant information that he or she has gathered and generates hypotheses for possible solutions that can be evaluated and tested.

4.3.1 Synthesize

Team members must share and process all the information from the empathize stream. The aim is to determine the people's jobs to be done and define the core problems that must be solved.

The *Solution Design Canvas* (see Exhibit 4.3) is a visual map created by the Italian company Beople to help entrepreneurs design human-centered solutions. It analyzes the decision-making mechanisms of customers in depth and identifies the required elements for formulating solutions suited to their needs.

Team members complete the map from left to right, top to bottom. They start with the definition of the persona that they want to understand and the activity that he or she intends to perform. The story recounted by Harvard Business School professor Clayton Christensen[11] offers a handy example we can use to explain how to fill the *Solution Design Canvas*.

[11] See chapter "*4.2.4.1 The importance of understanding the customers."*

Consider Jessica (*persona*). She is 28 years old and works as a Junior Analyst in a big consultancy firm. Jessica does not have a car and usually relies on Uber to reach her office. While waiting for transportation, she enters MacDonald's to buy something to eat or drink (*intention*).

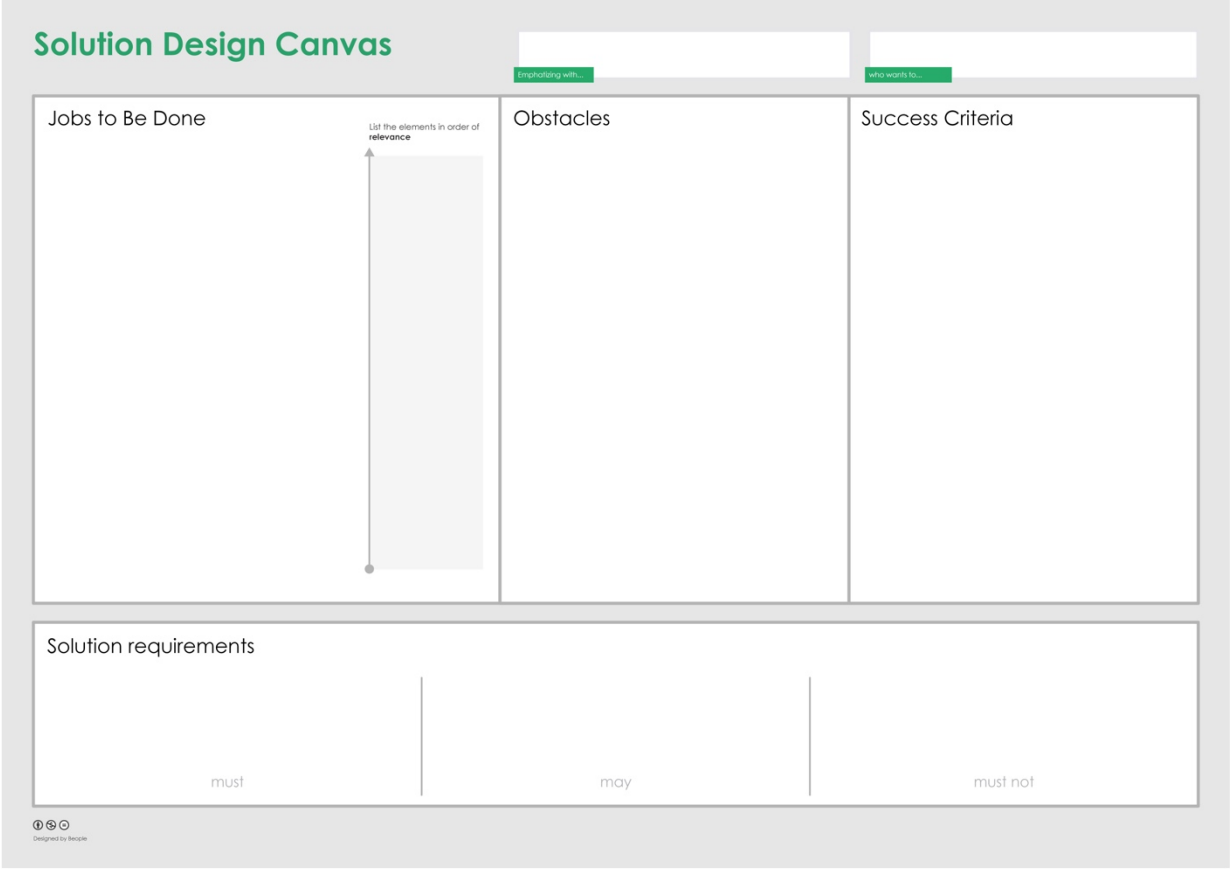

Exhibit 4.3 - Source: Fusco, M., Spagnolo, M., & Pinna, C. (2017). Innamorarsi del cliente. In M. Fusco, M. Spagnolo, & C. Pinna, Business design per le PMI: Come attivare l'innovazione che serve alla tua azienda (pp. 80-97). Milan: Edizioni LSWR.

The concept of *jobs to be done* describes the most significant problems that the individual wants to resolve in that situation (Christensen, Anthony, Berstell, & Nitterhouse, 2007): Why does she have that intention? What are the issues that she is trying to solve, or the deep needs that she is seeking to satisfy? Christensen explains the notion as follows:

"Most companies segment their markets by customer demographics or product characteristics and differentiate their offerings by adding features and functions. But the consumer has a different view of the marketplace. He simply has a job to be done and is seeking to hire the best product or service to do it" (Christensen, Anthony, Berstell, & Nitterhouse, 2007). If asked, Jessica would answer: "I need to suppress my hunger until midday. Moreover, I always face a long and tedious commute. I would love something to make it more enjoyable."

Obstacles include anything that annoys or limits the individual before, during, and after completing a task. Jessica works in consultancy. She has to wear a suit every day, and she usually has only one free hand, since she has to organize the agenda with her smartphone.

Success criteria refer to all the elements, results, and conditions that attest to the achievement of the person's jobs. Jessica wants a product that takes some time to be consumed; she must arrive at the office without sticky fingers or stained clothes. Ultimately, she seeks to fight off hunger until noon.

Solution requirements allow people to define the characteristics that the solution must, may, and must not have in order for the target persona to complete their tasks while satisfying *success criteria*.

4.3.2 The art of brainstorming

Brainstorming represents the goal-oriented version of daydreaming. It is a technique that allows individuals to tap into a vast body of knowledge and creativity. Throughout the *ideate* stream, entrepreneurs should do this both individually and with their teams, both with business partners and with people whom they are designing for. This technique stimulates the birth of ideas that can result in something fundamentally new in terms of value creation (Liedtka & Ogilvie, 2011).

Witnessing a great brainstorming session is just like watching a fireworks display. People gather next to each other. There are periods of silence and then explosions. Each explosion seems to trigger other explosions, leading to nothing but more chaos. Moreover, as soon as the show ends, there is a mess to clean up. However, hidden within the chaos may be some raw materials for several innovative concepts.

Brainstorming is a powerful tool that must be used in the correct way. The aim is not to find the perfect idea but many ideas in general. Everyone has experienced some sessions that lead nowhere. To avoid such situations, I provide five suggestions for an effective brainstorm:

Be different. Brainstorms work best with small and heterogeneous groups. According to the American design firm IDEO: "An interdisciplinary mix of thinkers, makers, and doers is just the right combination to take on any challenge" (IDEO, 2015). Unexpected solutions come from unexpected teams;

Stay focused. The team must focus on a clearly stated challenge. A brainstorming session without a problem statement is like a company without a clear roadmap. Team leaders must

ensure that everyone is focusing on the correct problem. They should not let the discussion wander too far and always bring the attention back to the main topic.

Play by the rules. Defer judgment, one conversation at a time, aim for quantity, and encourage wild ideas. These rules are needed in order to let creativity flow (Tischler, 2001). Team leaders should buy a poster, write them down, and be their watchmen;

Think visually. Brainstorms should literally fill the room so that everyone can see. Participants should write any concepts and ideas that they have down on Post-it notes and stick them onto any surface. Spatial memory is a powerful force that a team leader can use to bring participants back on track (Tischler, 2001). Each Post-it should contain one and only one element. Brainstorming sessions are not the place for writing full testaments.

Get visual. Drawings can be very powerful. People "react more strongly to images than words" (Osterwalder & Pigneur, 2010). Pictures can express messages –even feelings – that, otherwise, would require several sentences. Getting visual makes ideas more tangible and helps to clarify everyone's thoughts for the entire team.

The problem with drawings is that many people believe that they have less artistic talent than cave dwellers. And maybe it is true. Perhaps they cannot even draw the sun without using an eraser, but that should not stop them. Even the most unpolished sketch, frankly rendered, can make things tangible and understandable: "People interpret simple stick figures far more easily than abstract concepts expressed in text" (Osterwalder & Pigneur, 2010). There are two suggestions that everyone should keep in mind: be simple (e.g., a smiley face expresses happiness, a big heart love and affection) and use proportions (e.g., a big sack means a large amount of money, a small one just a little).

A great brainstorm provides a fantastic feeling of possibility, changing the way in which people approach problems. It may generate hundreds of ideas, ten of which might be great leads. Of course, it does not work as a stand-alone tool. Just as a powerful motor requires an excellent car, brainstorming needs to be used along with other activities that let us focus our creative force.

4.3.2.1 Warm-up

To stimulate creativity, people should start an ideation session with a warm-up such as the silly-cow exercise (Osterwalder & Pigneur, 2010). Here is how it works: Team leaders instruct participants to create three different business models using a cow. First, they ask them to define some characteristics of the cow: It eats all day, makes a mooing sound, produces milk, and so on.

Then, the participants have to use those characteristics to come up with innovative business models based on such a cow. They are given three minutes.

Team leaders should know that this exercise might backfire, as it is indeed quite silly. Nevertheless, as Osterwalder states, “It has been tested with senior executives, accountants, risk managers, and entrepreneurs, and usually is a great success” (Osterwalder & Pigneur, 2010). The goal is to take people out of their day-to-day routines. Eventually, they will see how quickly they can generate ideas by escaping normality and letting their creativity flow.

A digital warm-up: Murphy, the app that keeps you lucky. To test Business Telling, I decided to participate in several business challenges. There was a time when I ended up with a group of people who professed themselves to be ordinary thinkers. They did not believe that anyone of us could achieve unpredictable solutions. Thus, they decided to shut down their creative force right from the start. I knew I had to prove them wrong in the little time that we had. Therefore, I came up with an alternative to the silly-cow exercise. They were incredibly surprised afterwards, and they could not believe the ideas that they came up with. Seeing as how this exercise has worked so well, I would like to share it.

Team members should gather around a table filled with thick markers and packs of sticky notes. Everyone has to sketch out three different business models based on the following idea: Murphy, a mobile app that can somehow keep you lucky. First, they have to define some characteristics of the app (i.e., Is it a game? Is it a social media platform? Does it send you messages? How can we download it?). Then, they have to use those characteristics to come up with three innovative business models based on Murphy. They are given three minutes.

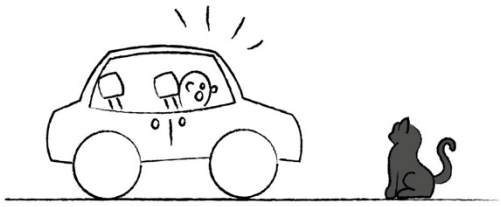

Exhibit 4.4 - Black cats crossing the street?! Never Again!

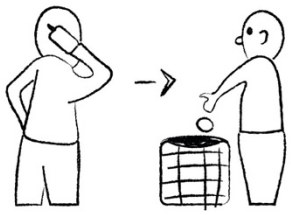

Exhibit 4.5 - Do you need luck? Find someone who can toss a coin

4.3.3 Find inspiration

Everyone knows how important it is to find the right solution at the right time (Savoia, 2019). This shared knowledge results in stress, anxiety, and barriers that can limit the creative flow of individuals. Team members might need a flash of divine inspiration to guide their firsts steps towards the creation of the ultimate innovation (Banfield, Lombardo, & Wax, 2015).

Imagine that it is the beginning of the twentieth century. We are sipping a good cup of coffee, but it is not a great experience. The cup is filled with coffee grounds that stick in our teeth, and the taste is unbelievably bitter. If it were not for the caffeine, we would probably never drink it. In that era, people brewed coffee as they did tea: They had to dunk a small sack of ground beans into boiling water. There was much room for improvement.

In 1998, a young woman called Melitta Bentz was tired of drinking poor and grainy coffee (Moses, 2018). "There has to be a better way," she thought, so she started looking for ideas. She chanced upon a piece of blotting paper inside her son's notebook. The material was thick, disposable, and absorbent; in other words, it was perfect. Shortly afterwards, Melitta made some holes in a bronze pot and placed it on top of a cup. She then put the paper inside that pot, filled it with ground coffee, and poured hot water on it. The resulting drink was surprisingly good. Melitta had just invented the paper coffee filter (Moses, 2018). Today, it still represents one of the most used tools for brewing coffee.

Everyone would love to design something completely new. However, astonishing ideas do not appear casually. Sometimes, innovation may be obtained just by shaping or mixing the core elements of existing ideas, or by dressing them up with particular characteristics. People had tried to produce some types of coffee filters before, but these were made from cloth. Melitta decided to use blotting paper, a product that has been right under everyone's noses the whole time.

Team leaders should start the activity by asking everyone to come up with a list of existing solutions to review for inspiration (Knapp, Zeratsky, & Kowitz, 2016). These may include products or services from different industries, fields, and contexts that share some of the requirements identified in the previous phase. The members should think outside the box, on the condition that everything has something that the team can learn from (Banfield, Lombardo, & Wax, 2015). After a few minutes of thinking, each person should write his or her top products on Post-it notes and stick them to the wall.

One at a time, individuals who suggested the products have to present what they like most about them to the other team members. This can take up to three minutes.
The team members should take notes about every interesting concept that may arise during presentations.

4.3.4 Sketch

Consider the following scenario: Marco and Luca are working in the same company. However, they play two different roles: Marco is the manager, and Luca is a sales representative. One day, Luca tells his colleagues that he wants to present a great idea that he has been working on for weeks. He starts talking about it, but all the others just stare at him. Perhaps he is not explaining it well, or the timing is not appropriate. In any case, no colleague can visualize the idea. Suddenly, Marco enters the room. He happened to have overheard some tiny details and proposes an alternative that just came up to mind. The idea is not well-thought; neither seems to be reasonable. However, all the people in the room nod their heads in approval. Maybe it is because Marco is the manager, and no one wants to disappoint him. Perhaps, he just explained the idea vaguely, and each person is interpreting it according to his or her thoughts. This story explains a situation that might happen in reality. Since abstract ideas lack concrete details, it is easy for people to either undervalue (as with Luca's idea) or overvalue them (as with Marco's; Knapp, Zeratsky, & Kowitz, 2016).

Idea generation begins with sketches. According to Stephane Cruchon, they represent the easiest and quickest way to translate abstract ideas into concrete solutions that people can understand and evaluate (Cruchon, 2020). Additionally, sketching allows individuals to design these solutions while working alone. In this way, they have time to perform some research, find inspiration, and stay focused on the problem. The pressure of working alone usually spurs everyone to give their best.

However, working alone is not simple: people must answer a problem and invent a strategy for solving it. A blank sheet of paper might be too intimidating. Thus, inspired by the book *Getting Things Done*, we break down the process into different steps. The author David Allen's secret is to consider a task as a completed puzzle: People should solve it piece by piece, completing each small action needed to make progress (Allen, 2015).

4.3.4.1 Notes

People wander around the room and take notes. They inspect all the whiteboards, visual maps, and inspiring ideas. The activity represents a way to refresh everyone's memory before working on possible solutions. Participants should start by recording the main vision at top of their notebooks. Then, they should look at all the data gathered by the whole team, the maps that they completed, and any other reference material that they can find on their laptops or phones. This should be done in 20 minutes. Team leaders may grant participants three more minutes to review their notes and circle everything that stands out.

4.3.4.2 Ideas

Creativity starts now. People fill their notebooks with sketches, drawings, graphs, diagrams, headlines – anything that can give form to their thoughts. It does not matter if ideas are chaotic, incomplete, and incomprehensible to another person; these notes will not be shared with the whole team. This activity may take up to 20 minutes. Again, team leaders may grant participants three more minutes to review and circle the ideas that stand out.

4.3.4.3 Crazy 8s

"Crazy 8s is a fast-paced exercise" (Knapp, Zeratsky, & Kowitz, 2016) in which each member chooses the idea that he or she prefers and quickly sketches eight variations thereof in eight minutes. The activity encourages individuals to go beyond their first reasonable solutions, envision possible alternatives, and make improvements.

Each person starts Crazy 8s with a single sheet of paper and folds it in half three times. Team leaders set the timers to 60 seconds, and everyone begins sketching solutions. They have one minute to complete each section, for a total of eight minutes to design eight alternatives of the same idea. The critical question is: "What would be another good way to do this?".

4.3.4.4 Solution sketch

Everyone chooses the best alternative and delineates the most important details. The outcome is a complete hypothesis for how to solve the problem at hand. The sketch will be looked at, analyzed, and evaluated by the rest of the team.

It is essential to communicate and share ideas clearly. Some models or frameworks may prove useful in achieving this objective (Lewrick, Link, & Leifer, 2018). The map that I propose is called the *Solution-Sketch Canvas* (Exhibit 4.6).

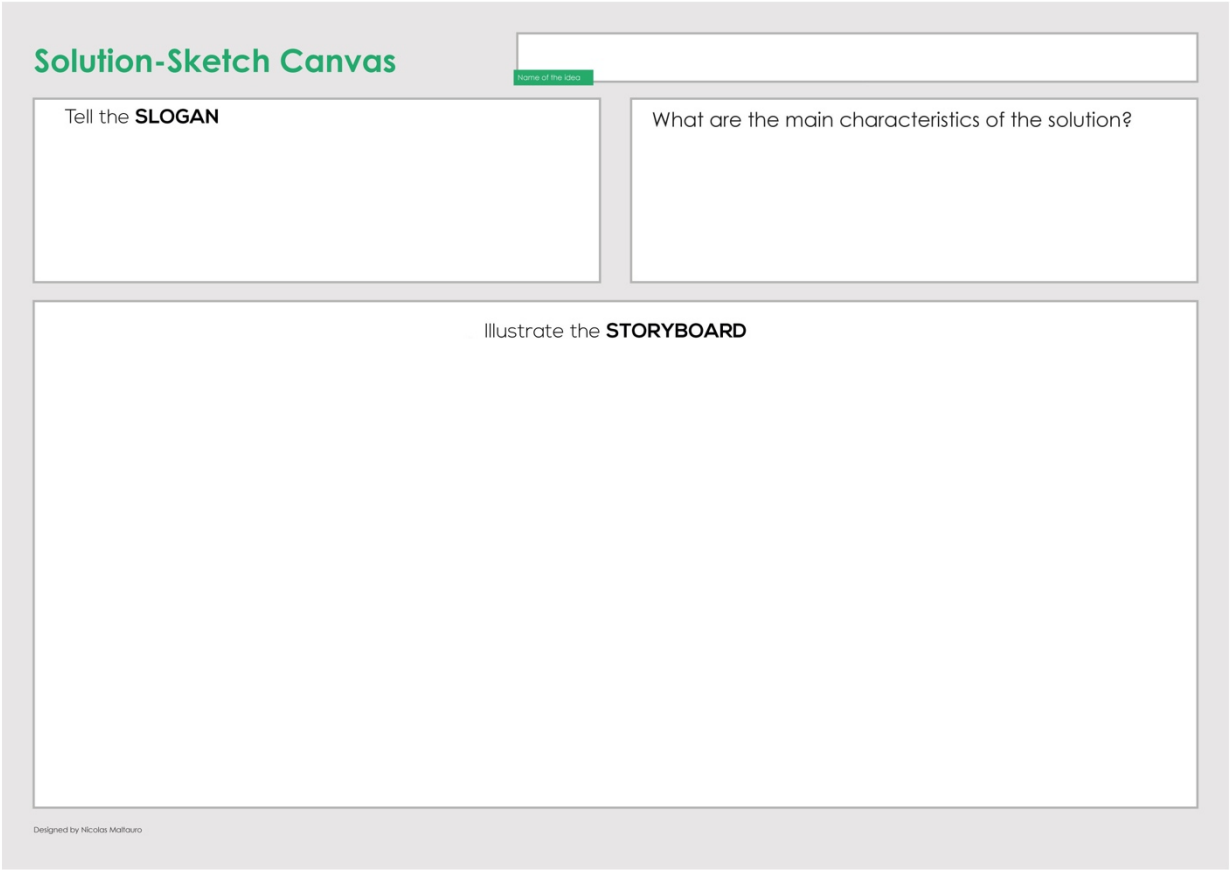

Exhibit 4.3 - Solution Sketch Canvas

Each person starts by writing the name of the idea at the top of the map. The name does not require perfection; it merely helps to give an identity to the concept. He or she then defines the main features and characteristics of the solution and creates a catchy slogan. The latter represents a three-to-four words statement that explains the project's goal or meaning (Kawasaki, 2015). Next, the person has to show how the solution works through a storyboard. He or she has to illustrate how customers interact with the given product or service on sticky notes. The idea is to picture people as if they were in a movie. The sketches do not have to be polished and refined, but they should be complete, detailed, and reasonable.

4.3.5 Decide

It is time to decide which solution to prototype. Team members create a museum of hypotheses by sticking their ideas on the wall. This composition empowers people to spread out, fill the room, and examine each sketch without being crowded by others.

The decision-making process is designed as a three-step activity:

1. Heat map: Everyone examines all the solutions in silence and uses dot stickers to mark interesting elements;
2. Pitch and critique: This is a quick presentation of the exciting parts of each solution; and
3. Vote: Each person chooses the idea that he or she prefers and votes for it with a dot sticker. The team leader then makes the final decision.

4.3.5.1 Heat map

"Naturally, every person should have a fair opportunity to present his or her solution and explain the rationale behind it" (Knapp, Zeratsky, & Kowitz, 2016), but this is not the case. Pitching an idea may result in many problems. For example, if an individual is charismatic or has excellent public speaking skills, he or she may tell a compelling story for the idea and charm everyone into supporting this lavished vision (Tracy, 2008). It is not difficult for good orators to create persuasive arguments for even the most ordinary ideas. However, in reality, orators will not be there to deliver pitches and clues. In reality, ideas must stand out on their own. If team members become confused and cannot understand them without help, customers will probably react in the same way (Banfield, Lombardo, & Wax, 2015).

The following activity guarantees that participants can get the most out of their first, uniform glance at the sketches (Knapp, Zeratsky, & Kowitz, 2016). Team leaders start by handing everyone several dot stickers. Members then wander silently around the room and examine each solution. They can place up to three dots beside the elements that they like the most (if any). They can also write their concerns on sticky notes and place them below the sketch.

4.3.5.2 Pitch and critique

Together, all the dots formed a heat map, displaying the ideas that people find appealing. In the *pitch and critique* activity, team members review each solution and take note of standout ideas. In particular, they have three minutes to narrate their sketches, focusing on the parts with the most dots. A two-minute "question and answer" (Q&A) session follows the presentation. People can express their concerns to the creator, who must respond to them.

4.3.5.3 Vote

Each person communicates his or her final choice and briefly explains the vote. The ultimate decision is up to team leaders, who can choose the most popular ideas or even ignore them. In any case, the choice is made.

4.4 From ideas to experimentation

Although the decision-making process illustrated in this chapter is not perfect, it ensures that everyone has a chance to be heard. Team members have the freedom to customize it in order to match their preferences.

When an idea is found, the desire to develop it starts burning in everyone's hearth. People fall in love with that idea and want to realize it right away. However appealing it may be, this course of action symbolizes an expensive and very risky shortcut (Savoia, 2011). The data, information, and insights that team members collect during the *explore* and *ideate* streams refer to something abstract that people might find it hard to imagine, and their opinions might not reflect reality.
The Law of Market Failures states that most wannabe innovations fail in the market. To fight the odds, entrepreneurs have to find the right solution to the right problem, execute it properly, and collect and act on New Information Collected through Experimentation (NICE). NICE is actual market data obtained from carefully designed and personally conducted experiments. To qualify as NICE, data must meet the requirements of newness, relevance, trustworthiness, and significance.

The following streams will introduce several tools and practices that help team members gather, analyze, and interpret market insights.

5. VALIDATE

There is no more important question than "What if we find ourselves building something that nobody wants?" (Ries, 2011).

Today, Zappos is a leading online shoe store, generating annual revenues of over $2 billion (Pontefract, 2015). It represents a flourishing, user-friendly, e-commerce business. However, its story did not begin this way. It began with a hero facing a problem: Zappos' silent founder, Nick Swinmurn, went to the mall to buy a particular pair of boots (Hsieh, 2010). Unfortunately, no shops were selling them. He became frustrated, since there were no other alternatives to buy that product. An idea struck his mind: "Why not create an online shoe store?" (Swinmurn, 2012).

At the time, there was no central online site that could offer a large assortment of such products (Hsieh, 2010). Swinmurn envisioned a new, unique and excellent retail experience. He could have waited a long time, insisting on creating the perfect business model before turning to potential customers, but he did not. He decided to run a simple experiment in order to test his most relevant hypothesis: Were people truly willing to buy shoes online?
To test this, he went from store to store, asking owners if he could take some pictures of their products. In exchange, he would upload those pictures online and return to purchase the shoes at full price if people bought them on his website:

> "I went to Footwear and said, "I'll take some pictures, put your shoes online, and if people buy them, I'll buy them from you at full price." The store said okay, and I got a few orders" (Swinmurn, 2012).

Zappos started with a basic, unrefined product. It was specifically designed to validate the most critical hypothesis: Was there sufficient demand for a new, unique, and excellent retail experience for shoes? The answer was clear. However, the experiment did more than just providing an answer. In the course of testing the aforementioned hypothesis, many other follow-up assumptions were validated: "Zappos had to interact with customers, take payments, manage returns and deal with customer support" (Ries, 2011). If Zappos had blindly trusted existing market research or simply performed an interview, it would have obtained an abstract idea of what customers believed they wanted. By creating a product, however simple it might have been, the company learned much more (Hsieh, 2010):

1. It obtained critical customer insights and more reliable data about the market demand. After all, Zappos was experiencing real behavior and not merely reading about it in a paper.
2. It had the opportunity to interact with real customers, understand their problems, and find the best way to solve them step by step. For example, the business model might have required a packaging strategy, but how were customers' perceptions of products affected by that strategy?
3. It experienced unexpected customer behavior that revealed problems and information that managers might not have considered.

In other words, Swinmurn and colleagues structured an experiment that could lead to a precise, measurable outcome: Either enough people would buy the shoes online, or they would not. It also forced Zappos to observe, interact with, and learn from real customers and partners. Although the early efforts were purposely small-scale, that did not stop the business vision from being realized. In 2009, Zappos was acquired by Amazon.com for a reported $1.2 billion (Lashinsky, 2016).

People tend to undervalue the time, energy, and resources required to validate a business model (Appelo, 2019). Almost everyone believes that the greatest hurdles in developing an innovation include getting funded and finding the right team members. [12] However, the reality is different. Several sources show that most entrepreneurs lose their jobs due to faulty business models (Feinleib, 2011; Fractl, 2016; Zimmerman, 2015). Sometimes, customers are not willing to buy the products or services; other times, companies are not able to monetize the value that they generate. Sometimes, drastic and unexpected environmental changes complicate everything. The outcome is always the same: Despite ambitious ideas, remarkable achievements, and best intentions, business models do not work, and companies die (Savoia, 2019).

The Lean Startup method offers entrepreneurs a framework to manage new product development from an initial idea to a validated product (Ries, 2017). It propels people to define, test, and measure hypotheses through several build-measure-learn cycles (Exhibit fig. 5.1). The goal is to minimize project risk and nurture validated learning through assumption-driven experiments, testing, and iteration.

Business Telling adopts lean experiments to validate a business model's most critical assumptions. Team members will create something to place right into the hands of customers, without whose feedback it would be impossible to know whether the solution is on target and how to evolve it.

[12] Here, I am referring to the Junior Entrepreneurs I interviewed.

Experimentation time has come.

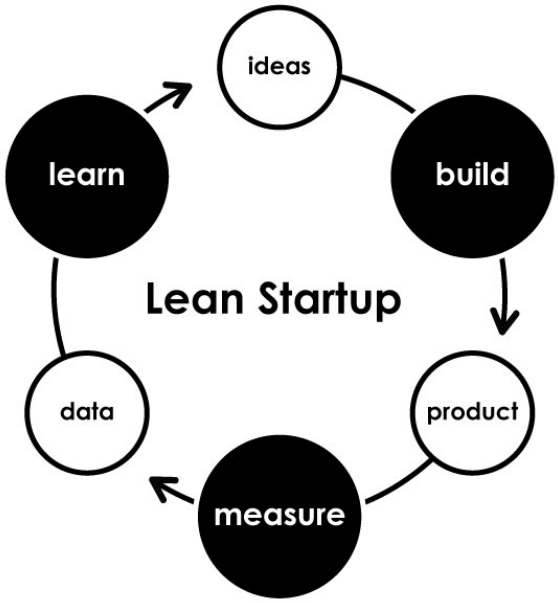

Exhibit 5.1 - Source: Ries, E. (2011). The Lean Startup. New York: Currency International Edition.

5.1 Define the hypotheses

In 2004, three college students arrived in Silicon Valley to present their new social network: Facebook (Kirkpatrick, 2011). Their names were Mark Zuckerberg, Dusting Moskovitz, and Chris Hughes. At the time, Facebook was not a market leader nor a first mover. Many other companies had already created platforms with similar or better characteristics. Additionally, Facebook was active on just a few college campuses: "With 150,000 registered users, it made very little revenue, yet that summer, they raised their first $500,000 in venture capital" (Ries, 2011).

Less than a year later, they collected an additional $12.2 million (Arrington, 2005). While the story shows many remarkable achievements, there is one major question that stands out: How could Facebook raise so much money when its usage was so limited? In *The Facebook Effect*, David Kirkpatrick describes two primary facts about the company's early growth that charmed investors (Kirkpatrick, 2011). First, Facebook's active users spent an incredible amount of time on the platform, and more than half of them visited the site daily.[13] Second, Facebook's adoption rate was

[13] Actual engagement rates are difficult to find. However, in 2005, Chris Hughes stated that, "60% log in daily. About 85% log in at least once a week, and 93% log in at least once a month" (Arrington, 2005).

disconcerting: “The software spread quickly from the very beginning. The first users sent emails to other students, asking them to join and become friends. That begat other emails from those students inviting their own friends to join” (Kirkpatrick, 2011). Facebook was launched at Harvard on February 4, 2004. By the end of the month, almost three-quarters of college students had an account (Ries, 2011). People could not stop using it.

Many economists criticized the faith that early investors placed on the newborn social network. They claimed that it had no business model and only modest revenues. However, after a month, Facebook had already validated its essential hypotheses: The business was value-creating and had a very strong engine of growth.

Several entrepreneurs, intrapreneurs, and managers are trying to create the next Facebook, yet they do not follow the lessons shown in its story. When developing an innovation, they should focus their early efforts to identify, define, and validate the most significant hypotheses that have to be true for their businesses to succeed. These are often called *leap-of-faith assumptions*, because the future of the entire organization relies on them (Mullins & Komisar, 2009). If they prove to be accurate, tremendous opportunities await. Otherwise, the company risks floundering in the abyss of failure.

5.1.1 Development of assumptions: Market engagement hypotheses

Clarity of thought is a requirement. If a novel product idea is vague, unclear, and subject to multiple interpretations, then team members do not possess a solid basis for moving forward. Before they start testing an idea, they must explain it with sufficient clarity in order to guide the design of valuable experiments (i.e., activities and techniques that lead to relevant insights).

Right A x Right B x Right C x Right D x Right E, etc = **Success**

Exhibit 5.2 - Source: Savoia, A. (2019). Thinking tools. In A. Savoia, The right it: why so many ideas fail and how to make sure yours succeed (pp. 61-77). New York: HarperCollins.

Exhibit 5.2 shows that success does not appear at random; it requires several factors, conditions, and events. As we have seen, there is no amount of money, time, and effort that can make the wrong solutions succeed.

A Market engagement hypothesis (MEH) identifies an essential belief or assumption about how the market will react to a given product or service (Savoia, 2019). Will customers want to learn more about it? Will they try, purchase, and use it? Will they recommend it to their parents and

friends? Market engagement hypotheses are short sentences that articulate the central premises of an idea and how (potential) customers will engage with it. For example:

> **Idea**: Netflix.
>
> **Market engagement hypothesis**: If we offer email-based delivery of DVDs with a flat monthly rate and no late-return fees (fact), we believe that people will sign up with us instead of renting movies from local video stores (belief).

5.1.1.1 A suggested practice: The XYZ hypothesis

A well-defined business hypothesis should describe a testable, precise, and discrete belief that we want to investigate (see Exhibit 5.3).

Characteristics of a good hypothesis	✓	✗
Testable A hypothesis is testable when it can be validated or invalidated, based on some evidence that team members can collect.	*We believe millennial parents prefer craft projects.*	*We believe millennial parents prefer curated science projects that match their kids' educational level.*
Precise A hypothesis is precise when it explains how success looks like. Ideally, it defines the precise what, who, and when of an assumption.	*We believe millennial parents will spend a lot on science projects.*	*We believe millennial parents with kids ages 5-9 will pay $15 a month for curated science projects that match their kids' educational level.*
Discrete A hypothesis is discrete when it defines only one distinct, testable, and precise thing team members want to investigate.	*We believe we can buy and ship science project boxes at a profit.*	*We believe we can purchase science project materials at wholesale for less than $3 a box. We believe we can ship science project materials domestically for less than $5 a box.*

Exhibit 5.3 - Source: Bland, D. J., & Osterwalder, A. (2019). Hypothesis. In D. J. Bland, & A. Osterwalder, Testing business ideas (pp. 30-35). Hoboken: John Wiley & Sons.

One important requirement mentioned above is precision. According to David J. Bland and Alexander Osterwalder, team members should avoid using indefinite terms and include numbers when possible (Bland & Osterwalder, 2019).

> **Fuzzy assumption:** We believe that if we increase the size of our "Enter the Beta" button, we will receive a higher number of clicks.
>
> **Discrete, precise, and testable hypothesis:** We believe that if we make our "Enter the Beta" button 30% larger, we will receive at least 10% of more subscribers.

Numbers can translate a vague belief into a precise hypothesis that can be tested. However, people might find it difficult to venture outside their fuzzy boundaries. Alberto Savoia offers a useful technique to help them in this process: *the XYZ hypothesis* (Savoia, 2019).

"At least X% of Y will Z."

He explains it as follows: "X% is a specific percentage of your target market[14]. Y is a clear description of your target market. Z is how you expect the market will engage with your idea" (Savoia, 2019).

Mathematicians and physicians adopt the letters X, Y, Z to express unknown variables. This convention can be perfectly adapted to represent assumptions. After all, when people try to bring a novel product to market, they undertake a journey into the unknown. It is like sensing a White Rabbit and following it through its burrow, with just a little knowledge of what it will come next.

No wise adventurer would explore the unknown without the essential tools needed to survive and trace his or her location. Similarly, the XYZ hypothesis represents a basic tool for market exploration.

5.1.2 Finding early adopters: Hypozooming

Hypozooming means starting from a precise but broad MEH and zooming in until we reach a version of the hypothesis that is immediately actionable and testable. While the former describes the ultimate target market, the latter identifies a small, local, and reliable subset of (potential) customers. Eric Ries refers to them as *early adopters*[15] (Ries, 2017): a special breed of customers that do not need a perfect solution to capture their interest. Entrepreneurs may have global plans for their product, but, before committing to development, they should test their idea on a small scale and hypozoom.

No one can predict if a product will be successful in the market with absolute accuracy. The only way to know for sure would be to produce the product in large quantities, launch a proper marketing campaign, and observe the outcome. Unfortunately, this might represent a hazardous and costly strategy to undertake. Entrepreneurs can minimize the gamble by running several experiments.

[14] This number does not come out from nowhere. It must be an educated guess based on the minimum market size team members believe they need to obtain for their idea to be valuable.

[15] To learn more about how to identify early adopters, see Maurya (2012).

5.2 Experiment

5.2.1 Validate the problem

When an entrepreneur wants to launch an innovation, he or she is sure to answer a particular customer need. However, this belief assumes that people will always use any solution to satisfy the problems they feel (Fusco, Spagnolo, & Pinna, 2017). Unfortunately, the reality is different. Many new products and ideas fail, regardless of the needs they address (Savoia, 20119). Entrepreneurs tend to fall in love with their visions (Barringer & Ireland, 2015) and start investing right away (Blank, 2012). They arrogantly believe that they know what customers want and need, and they impulsively commit to developing what they have in mind. However, there is no amount of money, time, and effort that can make the wrong solutions succeed.

In his book *Pretotype it*, Alberto Savoia tells a very enlightening story about the IBM speech-to-text project (Savoia, 2011). Back in the 1980s, far from the age of the internet and personal computing, most people were not good at typing: They would use just one or two fingers, making the whole process slow and inefficient. It was a severe problem that threatened to create barriers for people who wanted to use a computer – or so companies thought. In that period, IBM was a leader in mainframe computers and typewriters. It had the ideal position to leverage the know-how and technology that it possessed to develop a speech-to-text machine. The device would enable people to speak into a microphone and see their voice magically translated into written words. Typing would no longer be a problem. It seemed a very profitable investment, and managers were ready to give it a chance. However, there were some significant issues to address. Speech-to-text is a technology available to everyone today, but it was nearly inconceivable at that time. It requires considerable processing power, and powerful computers were both difficult and expensive to develop. Additionally, even with adequate computing power, speech-to-text translation was tough to realize. It would have required a massive investment and several years of research. This represented a critical decision, even for IBM. Therefore, some managers were not fully committed to the project. They feared that the company would wind up spending a considerable amount of resources developing a device that only few would buy. All things considered, people had never adopted a speech-to-text machine, so how could they be sure that customers would want it? It was a good point, and IBM decided to test the business viability of the project. However, since the development of the most basic prototype required some years, they designed a fascinating experiment.

They summoned some beta testers[16] in a room with a computer box, a screen, and a microphone. They told the testers that they had successfully created a working speech-to-text prototype and wanted to see if people liked using it. When the testers started speaking into the microphone, their words magically appeared on the screen. The system was flawless: Sentences were immediately and correctly displayed. Everyone was deeply impressed – it seemed too good to be true, and they were right. There was no speech-to-text machine or prototype. Hidden in the other room, a professional typist was listening to the individuals. Whatever he or she entered into the keyboard showed up on the tester's screen: a simple but ingenious way to test the validity of the project.

What did the company learn from such an experiment? After being initially impressed by the incredibly accurate speech-to-text technology, most people became skeptical after using the device for some time. Despite the rapid and accurate translation, the system resulted in too many problems. For example, people ended the day with irritated throats. Moreover, the device created noisy working environments and was not appropriate for confidential information (Savoia, 2011).
Thanks to the experiment, IBM decided on the right business decision: to invest in speech-to-text technology, but on a modest scale. As it turns out, the keyboard still represents the most used system to enter text today. Therefore, the experiment resulted in an efficient way to test the market potential of the related project. However, it cannot be defined as a "proper" prototype. They did not create a speech-to-text system; they only pretended to have developed it. This way, they were able to collect valuable customer insight and usage data with only a small investment.

Traditional prototypes are very effective at validating and measuring the market potential of new ideas (Kawasaki, 2015; Richardson, 2015). They translate abstract concepts into concrete products that people can evaluate objectively. Nevertheless, in some cases, the creation of a prototype may be too costly, time-consuming, and complicated. Entrepreneurs may have to dedicate months or even years and invest a massive amount of resources into developing it. "Furthermore, most prototypes are built to answer questions such as, "*Can we build it?"* or *"Will it work as expected"* instead of focusing on questions such as "*Should we build it at all?*" or *"If we build it, will people buy it and use it?"*(Savoia, 2011). If we cannot answer the latter questions positively, the former ones become of little interest. That is why companies should validate the problem before starting to build the solution: They should create a pretotype.

[16] They included people who said that they would definitely buy the speech-to-text device.

Savoia defines pretotyping as "testing the initial appeal and actual usage of a potential new product by simulating its core experience with the smallest possible investment of time and money" (Savoia, 2011). The less formal definition "fake it before you make it" explains the concept well: Entrepreneurs should ensure that they have found the correct solution to the correct problem, before building it as quickly and as cheaply as possible (Savoia, 2011). Pretotypes allow us to gain valuable insight and usage data to decide whether to develop a given idea. They help reduce testing costs and minimize the risk associated with innovation. Many companies tend to spend large amounts of resources in research and development (R&D) during the first phases of product development (i.e., when the risk is the highest). Through problem validation and pretotyping, entrepreneurs can move these investments to a later stage, increasing their chances of success.

Today, it is common to create prototypes to test and validate solutions. We should adopt the same process when creating a strategy: Every strategy should be pretotyped, prototyped, and tested just like any product (Fusco, Spagnolo, & Pinna, 2017).

5.2.2 Pretotyping techniques

A pretotype represents the most straightforward artifact, or technique, that entrepreneurs can use to collect reliable first-hand market data. The following pages include some examples of different pretotyping techniques (Savoia, 2019). However, the list is by no means exhaustive; readers should consider it merely as a source of inspiration. Each idea is different, and entrepreneurs might need to adapt or combine existing techniques in order to validate it.

5.2.2.1 The Mechanical Turk[17]

The Mechanical Turk pretotyping technique gets its name from the eighteenth century Mechanical Turk chess-playing "engine" (Schaffer, 1999). People were led to believe that the Turk was a marvelous engineering device programmed to play chess. In truth, the box concealed a talented chess player, who was controlling the mannequin.

Entrepreneurs can use a Mechanical Turk pretotype to substitute expensive, advanced, or nonexistent technology (i.e., still under development) with a hidden human being performing the activities of that technology.

The IBM experiment reported in the previous chapter shows an excellent example of the pretotyping technique in action. Developing a decent speech-to-text prototype would have required

[17] It is also known as The Wizard of Oz.

several years and considerable resources. Nevertheless, a human typist efficiently simulated this complex function and enabled the company to obtain the NICE that it needed.

5.2.2.2 The Pinocchio pretotype

The Pinocchio pretotype borrows its name from the famous fictional character Pinocchio, a wooden puppet who aspired to become a real boy.

During the 1990s, Jeff Hawkins had an idea: He wanted to create a smart personal digital assistant (PDA) that would fit into a shirt pocket (Butter & Pogu, 2002)[18]. However, before committing to the development of a complicated and expensive prototype, he wanted to validate some hypotheses. Hawkins knew the technical requirements that the technology needed and how to build it, but he lacked other information: Would he use such a device during his daily life? What activities and features would he use it for, and how often?

He retreated to his garage, carved a block of wood that fit into his shirt pocket, built a symbolic stylus, and chose paper sleeves to simulate user screens and functions. Hawkins carried that block of wood around for months, pretending it was a fully functioning device. This simple experiment helped him to collect valuable data. The intended size of the device was not a problem, and he would use the screens mostly as an address book, calendar, memo, and to-do list (Butter & Pogu, 2002). Eventually, he gathered enough data to assess whether he would love a working version of the pretotype, and the answer was yes.

Hawkins would have to conduct other experiments to validate customer interest. Nevertheless, the project passed a significant test: Its inventor would use it. A Pinocchio pretotype may help to guide and justify the investments required to develop a proper prototype.

5.2.2.3 The fake door pretotype

Fake door pretotyping is a technique that entrepreneurs can use to validate how many potential customers or users would be interested to learn about their idea. They create a *front door* (e.g., a website, brochure, or even a physical storefront) and pretend that the product or service exists. The reason is apparent: If we cannot incite customers to knock on our front door (i.e., to express interest in the product), we should go back to the *explore* flow and review our vision.

Let us assume that Sara wants to create a business platform that marries performance management practices with a role-playing game (RPG) atmosphere. She knows that most startups fail in the

[18] Jeff Hawkins' invention would eventually become the PalmPilot.

market. Before committing time and resources to developing the software, she wants to assess the level of interest in such an idea. Fake door pretotyping represents an efficient technique to accomplish this.

First, Sara buys the FunHRManagement.com domain. She then creates a basic website using a free web design tool. The landing page consists of a mocked-up version of the software, a description of its main features, and an "Enter the Beta" button. The button redirects visitors to another page that shows the following message:

"Fellow adventurer, thank you for your interest in *Fun HR Management*. We are working hard to develop the software, but it is not quite ready for release. If you are interested in a beta version, leave your email in the form below, and we will contact you as soon as the software is ready.
In the meantime, happy questing, and don't forget to bring your mighty sword with you!"

Once the Fake door pretotype is ready, Sara wants to communicate it to people around the world. She writes an online advertisement: "Do you want to maximize employee engagement and productivity? Go to www.funhrmanagement.com and see if you can try the ultimate gamification experience." She then invests $50 to display her advertisement on selected websites and social media. Sara is now ready to collect useful and reliable data.

Developing a fake door pretotype requires a small amount of money, labor, and technical skills. It allows entrepreneurs to collect NICE and decide whether to prototype their idea.

5.2.2.4 The video pretotype

Movies and videos have always enabled us to visualize and experience stories, locations, events, and devices that do not exist in reality. Video pretotyping exploits movies' power to show product ideas to potential customers and observe how they react.

Drew Houston is the founder and CEO of Dropbox, a company that offers a remarkably user-friendly file-sharing software. When people install a given application, a Dropbox folder appears on their smartphones or computer desktops. Everything they drag or place into the folder is uploaded automatically to an online server and can be rapidly accessed from any device.
The founding team consisted of engineers, since software development requires vast technical expertise (Smale, 2018). Anyone would have expected them to apply traditional waterfall thinking in creating the product. However, they did not.

Simultaneously with their development efforts, team members wanted to collect feedback and insights from customers regarding what they valued most. Dropbox tested one leap-of-faith assumption: “If we can provide superior customer experience, will people give our product a try?” (Ries, 2011). They believed that file synchronization was a need that most people did not know they had and were ready to validate that belief. Unfortunately, creating a working prototype involved excessive difficulties. Additionally, the software included an online service component that demanded high reliability and availability. To minimize the risk of spending time, energy, and resources developing a product that nobody wanted, Drew decided to create a video (Collins, 2017).

The video illustrates a three-minute demonstration of how the software should work. Drew targeted it towards a community of early technology adopters. He presents it personally, and, as he describes every feature, the viewer can see how Drew’s mouse manipulates his computer.

The results were astonishing: “It drove hundreds of thousands of people to the website. Our beta waiting list went from 5,000 people to 75,000 people literally overnight. It totally blew us away” (Collins, 2017).

5.2.2.5 The one-night stand pretotype

A one-night stand pretotype is characterized by the lack of a long-term commitment or investment (Savoia, 2019). The experiment can last from a couple of hours to months, depending on the minimum amount of time that team members need to collect enough data and customer insights in order to make an informed decision. The story of Airbnb contains a great example of a one-night stand pretotype in action.

In late 2007, Josh Gebbia and Brian Chesky needed help to pay the monthly rent of their residence (Gallagher, 2017). To make some cash, they decided to rent three air mattresses in their living room. They offered a tasty breakfast, wireless internet, and the promise of unique networking experiences. Joe and Brian purchased the airbedandbreakfast.com domain, designed a single-page website showing where their apartment is, and advertised it on Craigslist. A few hours later, they had their first customers: two men and one woman paid $80 each to sleep in a mattress next to strangers (Gallagher, 2017).

As soon as the guests left, the two roommates recognized an opportunity and created Airbnb. Today, according to Forbes, the company is worth more than $38 billion (Team, 2018).

5.2.2.6 Main characteristics of a pretotype

As we have seen, a pretotype can assume many different forms, based on the idea or problem that we want to validate. Nevertheless, there are three essential components that an experiment has to satisfy in order to be defined as a pretotype:

1. It has to produce valuable data, information, and insight (i.e., NICE);
2. It has to be implemented quickly; and
3. It has to be implemented cheaply.

The primary objective of pretotyping is to answer the following questions:

- Do people feel the need to use the product?
- Would they use it?
- How often would they use it?

5.2.3 Validate the solution

Once team members have validated customer interest, they are ready to determine how to build the solution and turn their pretotypes into a concrete product. Here, we discuss the concept of the agile prototype[19] (AP) and its relationship to Business Telling.

No company should start by creating a product with every feature that a mainstream customer needs at once (Blank & Dorf, 2012). Business Telling promotes strategies that maximize value and minimize risk at any stage of the development process. An agile prototype is a product with the fewest number of features needed to solve the core problem that entrepreneurs have identified, and that is suitable for future, fast, and iterative improvement cycles. By creating and testing it, a team can learn vital information about technical viability and customers' preferences. It represents the fastest way to validate the core elements of a solution (Will it work as intended? Will it achieve the outcome that we desire? How large, small, or energy-efficient can we make it?) with the minimum amount of effort.

Unlike the traditional waterfall development, which suggests a long, careful, and precise incubation period and aims for product perfection (Sureshchandra & Shrinivasavadhani, 2008), the objective of an AP is to complete the process of validation as soon as possible.

[19] "Agile prototype" is a term that I invented to define the first type of prototype that team members should build according to the Business Telling logic.

One of the most troublesome aspects of the agile prototype is the challenge that it poses to conventional perceptions of quality. Most entrepreneurs usually strive for a high-quality, flawless product (Juran & Godfrey, 1999); it is a question of pride (Fusco, Spagnolo, & Pinna, 2017). They rely too heavily on W. Edwards Deming's famous motto: The customer is the most crucial part of the production process (Deming, 2012). Thus, they concentrate early efforts in creating outcomes that those customers will regard as incredibly valuable. Allowing mediocre works in processes may cause unnecessary variation. This in turn leads to products of changing quality in the eyes of people, which might involve rework or even result in a loss of customers. Many business and engineering philosophies focus on delivering a high-quality experience as a primary objective: It represents the basis of Six Sigma (Pande & Holpp, 2001), lean manufacturing (Liker, 2005), and extreme programming (Beck, 2000). These discussions of quality assume that entrepreneurs already know what specifications, features, and characteristics their customers will value. In a dynamic and uncertain environment, this is a dangerous assumption to make.

Teams can use a *low-quality* agile prototype to learn how customers will approach a given solution and which its attributes they care about, thereby obtaining a solid empirical foundation on which to build future products.

5.3 Final remarks on experimentation

Creating a prototype involves the assumption of some critical risks (both real and perceived), which must be well-understood ahead of time. Eric Ries affirms that the most common speed bumps include legal issues, fears about competitors, branding risks, and impact on a team's morale (Ries, 2011).[20]

> First, entrepreneurs and managers carrying out projects that rely on patent protection must face particular challenges with the development of an early product. In some countries, for example, the window for filing a patent opens when a company releases the product to the general market. Therefore, based on how it structured the agile prototypes, the act of realizing it might start the timer. Albeit a company is not located in one of those countries, entrepreneurs might desire international patent protection and might have to follow the related requirements[21].

[20] These findings have been validated through a chat that I had with the manager of an important MNE.
[21] See https://www.ufficiobrevetti.it/en/patents/the-italian-patent/ to learn more about Italian patent regulations.

In many industries and markets, people create patents mainly for defensive purposes (i.e., to discourage competitors). In such contexts, the patent risks of an agile prototype are secondary compared with the long-run learning advantages. However, the story is different when scientific and technological discoveries are at the heath of a company's competitive advantage. In all cases, entrepreneurs, intrapreneurs, and innovation managers should seek legal counsel to understand the risks thoroughly.

Second, entrepreneurs might refuse to build an agile prototype because they fear that competitors –especially LE– might steal their idea. However, it is unrealistic (Burns, 2019). Most managers are already overwhelmed with great ideas. Fortunately, they struggle in prioritizing and executing them in the right way, leaving entrepreneurs enough space to succeed [22]. In any case, there is some wisdom in fearing the competition. Fast followers will emerge sooner or later, regardless of the industry or market. The only method to contrast them is to learn better and faster than anyone else.

Third, visionaries are particularly fearful of failure (Sims, 2012; Kuyatt, 2011). They suspect that customers will discard a flawed, unpolished, and too limited agile prototype. This belief leads companies to release complete and high-quality products without prior testing. They could not bear the suffering of showing them in any form less than their full glory. When an AP fails, team members might give up hope and drop the project altogether. However, it exists a solution to this problem: iteration.

5.3.1 From the agile prototype to the "manage" stream

To solve the problem, team members should commit to iteration. They have to commit to an unbreakable (ex-ante) agreement that they will not give up hope, regardless of what happens during the agile prototype experiment. Successful entrepreneurs do not succumb to the first sign of trouble, nor do they persevere until they go down with the ship. Instead, they possess a special mixture of perseverance and flexibility.

An agile prototype represents a step towards the journey of learning. Down that road (i.e., after several iterations), we may discover that customers do not appreciate some elements, characteristics, or features of our product and decide whether to pivot or try a different method to

[22] The concept represents the hearth of the *Innovator's dilemma* by Christensen (2013).

achieve the initial vision. We need a disciplined, systematic approach to obtain validated learning, manage progress, and ensure informed decisions. Let us venture into the *manage* stream.

6. MANAGE

Entrepreneurs, intrapreneurs, creatives, and innovation managers tend to be optimistic by nature (Koudstaal, Sloof, & van Praag, 2015). They trust in their ideas and projects, even when there are clear signs that they are not succeeding. The myth of perseverance tricks people into believing that everything can be achieved if they try hard enough (Fusco, Spagnolo, & Pinna, 2017). We all know the tales of intrepid individuals who managed to succeed, even in the grimmest scenarios. Unfortunately, we do not hear stories about the myriad of nameless who persevered too long, leading their companies to failure. Innovation requires humility. It requires the capacity to test one's assumptions, monitor and analyze progress, and eventually accept being wrong.

Initially, an innovation is little more than an abstract idea in an entrepreneur's mind. Most elements included in the business model are merely assumptions about how things will work out. Sometimes, they prove to be accurate. Other times, they forecast unrealistic scenarios. An entrepreneur's job is to assess what the current situation is, design experiments to collect valuable information, measure progress, and iterate to achieve the optimal.

In the *manage* stream, we present several tools and techniques to approach a revised version of Eric Ries' innovation accounting (Ries, 2017), and help team members ensure they are collecting valuable information to grow a repeatable, scalable, and profitable business model (Blank, 2012). Our innovation accounting is structured in three steps:

1. First, experiment with pretotypes and agile prototypes to establish real and fresh market data (NICE);
2. Second, based on feedback, iterate to evolve the chosen agile prototype from the baseline toward the ideal. This process may require many attempts. Team members can use a Kanban Board to visualize work, manage micro-changes, and optimize their product (Benson & Barry, 2011).
3. Third, evaluate the result and decide whether to pivot or persevere (Ries, 2017). If team members are making good progress toward achieving the vision, that means they are learning properly and using the new knowledge efficiently. In this case, it is reasonable to persevere. If not, the strategy is flawed and requires an urgent change. When team members decide to pivot, they jump back to a previous flow of the Business Telling vortex to establish a new baseline.

Innovation requires change, improvements, empathy, and humility. It relies on the exploitation and exploration of opportunities. To succeed, individuals and teams should engage in projects that are exploratory or inventive by nature. Standard work and traditional management processes do not necessarily apply. We want to understand our work, not enclose it into some rigid process. We need flexibility.

Chapter 6 offers useful insights into how entrepreneurs can measure progress, prioritize activities, and manage work.

6.1 Evaluate data from experiments

Engineers, designers, and marketers are all skilled at optimization. For example, engineers know how to improve a product's performance, designers excel at making it easier to use, and marketers are talented at split testing value propositions to different groups of customers. Nevertheless, if we are building the wrong solution, or tackling the wrong problem, optimization strategies will not yield significant results.

Innovation requires us to measure progress against a high bar: that a sustainable business model can be built around a new product idea (Blank & Dorf, 2012). This evaluation is possible only if we have formulated precise, tangible hypotheses ahead of time and followed those assumptions with reliable tests (Savoia, 2019). The *validate* stream helps us convert an undefined, nebulous, and poorly articulated idea to testable, precise, and discrete hypotheses. Through pretotypes and agile prototypes, we can then collect NICE by testing those hypotheses rapidly and inexpensively. The *manage* stream allows us to analyze, understand, and exploit the information we gather.

6.1.1 Assess the potential of a project: The Skin-in-the-Game Caliper

Entrepreneurs often take many risks in developing an idea (Barringer & Ireland, 2015): They can gain or lose considerable resources depending on the outcome. This gamble might be an indication of commitment, perseverance, and thoughtfulness (Taleb, 2018). However, people should not venture too far into the unknown unless they can prove that the market is also interested enough in the idea to take some risks.

Alberto Savoia developed a technique called the Skin-in-the-Game Caliper[23] that we can use to evaluate projects by assigning points to different types of market responses (Savoia, 2019).

Let us assume that Jimmy is an aspiring entrepreneur who wants to create Drinko, a $300 automated cocktail maker for everyone's home. People can fill Drinko with any beverage they desire, and thirty seconds later this fantastic machine delivers perfectly made cocktails. When Jimmy presents his idea to friends and colleagues, he receives excellent feedback. Almost everyone agrees that they would buy it. Unfortunately, designing, developing, and producing Drinko will require significant time and resources. Even a basic agile prototype might take several months and cost thousands of dollars, which is a significant risk. Before chancing everything by committing to an all in investment, Jimmy wants to collect NICE. He decides to create a Mechanical Turk pretotype[24] and test the idea. A few days later, the dummy Drinko stands on the desk. The sign states:

Hi, I'm Drinko, your personal bartender! Tell me what you want to drink by saying, "Ehi Drinko, prepare me a [name of the drink]." Since I'm still a novice, the choice is limited to the following three drinks...".

Hidden beneath the desk, an assistant has some bottles of premade cocktails. Every time a person asks Drinko to prepare a given drink, the assistant fills a glass, plays a robotic sound, and pushes the drink out of the machine. Jimmy could collect valuable information by inviting friends and colleagues to his home or by uploading an online demonstration on YouTube. After people experience and interact with Drinko, how would Jimmy assign points to the responses he collected from the market?

Exhibit 6.1 shows an example of the Skin-in-the-Game Caliper in action:

- The tool disregards both random and expert opinions because, in many cases, "experts do not know any better than nonexperts" (Savoia, 2019). For example, the Ford Edsel was designed by many automotive experts with excellent records of successes. Nevertheless, the strategy resulted in a loss of $350 million and was one of Ford's biggest commercial failures (Feloni, 2015). Similarly, Google is one of the leading companies in software development. Their know-how and expertise are almost

[23] Generally speaking, the expression "to *have skin in the game"* means to be directly involved in or affected by something. Alberto Savoia uses the metaphor to indicate the process of bringing a new idea into the market, and "*victory"* or "*failure*" depends on whether that idea succeeds or not.

[24] See *Chapter 5.2.2.1 The Mechanical Turk pretotype.*

The Skin-in-the-Game Caliper in Action

Type of Evidence	Examples	Skin-in-the-Game Points
Opinion (expert or nonexpert)	"Great Idea." "No one will buy it."	0
Encouragement or discouragement	"Don't give up! Go for it!" "Don't quit your job."	0
Throwaway or fake emails address or phone number	"bugmail@spam.com" "(123) 456-7890"	0
Comments or likes on social media	"This idea rocks!" Like/Dislike	0
Surveys, polls, interviews online or offline	How likely are you to buy on a scale of 1-5: _____".	0
A validated email address with the explicit understanding that it will be used for product updates and information	"Leave your email below to receive updates about the product: _____".	1
A validated phone number with the explicit understanding that you will be called for product updates and information	"Leave your phone number so we can organize a call and talk about our product: (___)___ _____".	10
Time commitment	Come to a 30-minute product demonstration	30 (1pt./min.)
Cash deposit	Pay $50 dollars to enter the waiting list	50 (1pt./$)
Placing an order	Pay $300 to buy one of the first 5 units when available	300 (1pt./$)

Exhibit 6.1 - The Skin-in-the-Game Caliper - Source: Savoia, A. (2019). The Skin-in-the-Game Caliper. In A. Savoia, The right it: Why so many ideas fail and how to make sure yours succeed (pp. 149-156). New York: HarperCollins.

unrivaled, yet they failed with Google Buzz (Patel, 2019). Therefore, personal opinions or encouragements rate a zero on the caliper.

- Additionally, the caliper also assigns zero points to online reactions, such as likes, dislikes, comments, and tweets. This information may be useful during

the *explore* stream to understand and empathize with customers. However, here it translates into less useful insights.

- The first relevant data appear when people knowingly and willingly[25] leave a validated email address so that they can receive updates, promotions, and information regarding the specific product. One email confers one point.
- A validated phone number has a higher value. Since people are usually more careful in sharing these, it seems reasonable to assign them ten points each.
- An individual's time is worth one point per minute. If people are willing to invest a considerable amount of their time listening to a new product idea, they will likely offer effective feedback.
- Finally, money that people are willing to spend imparts one point per dollar received.

Entrepreneurs should adjust the caliper according to their own markets and ideas. They should not be excessively precise (e.g., an email is worth 0.5 points and time commitment 2.1 per minute). It is useful to reason in terms of orders of magnitude (1, 10, 100) and to follow one's intuition and experience in creating those estimations. Everyone should be honest, objective, and reasonable in assigning the relative rates.

6.1.1.1 Example: Evaluating the projects of two different teams

Imagine we are in a business competition. The finalists, Team A and Team B, take the stage to present their projects.

> Team A starts by playing a showy YouTube video of their product: "In just one week, we received 160,000 views, 31,000 likes, and more than 7,000 comments (most of which are incredibly positive). Additionally, our social media have hundreds of thousands of followers. We are ready to develop the product!"
>
> Team B also displays a video. However, instead of using total views, likes, and comments as metrics, they present the project as follows: "We created a one minute video to demonstrate how our product works and spent $300 on online and social media ads to advertise it. After a week, 7,500 people viewed our video in its entirety. At the end of the video, we asked viewers to leave their emails in a comment if they wanted to be informed about the released date. We collected 110 email addresses, 90 of which have been

[25] Emails collected (or bought) without the owner's explicit consent shall have zero points.

confirmed. Five days later, we sent a follow-up email to those 90 potential customers, allowing them to preorder a beta version of our software for $60 (a 45% early-adopter discount). We received 35 requests."

The Skin-in-the-Game Caliper suggests that our vote should go to team B. It may seem that Team A displays more impressive results than team B, but their numbers cannot be considered as reliable data. Team A does not even tell how many resources its members expended to reach 160,000 views. In other words, it has quantity, but not quality. In contrast, Team B presented both numbers and the context in which to judge them:

1. $300 in adverting led to 7,500 views. This information gives zero points, but it lets us estimate how much it will cost them to get a single view (i.e., $0.04);
2. 7,500 views resulted in 90 validated email addresses (i.e., 90 points);
3. 90 emails led to 35 subscriptions for $60 each (i.e., 2,100 points).

6.1.2 Evaluate a project's likelihood of success: The TRI (The Right It) Meter

Collecting data is useful to test and validate Market Engagement Hypotheses. However, raw data are not sufficient to allow entrepreneurs to make informed decisions. Instead, they require a systematic process to understand, evaluate, compare, and combine those data with other relevant information (Ellis & Brown, 2017).

The TRI meter is a visual analysis tool that allows people to assess the likelihood of an idea succeeding in the market (Savoia, 2019). Exhibit 6.2 shows a TRI meter performed with four pretotyping experiments (represented by the colorful arrows on top).

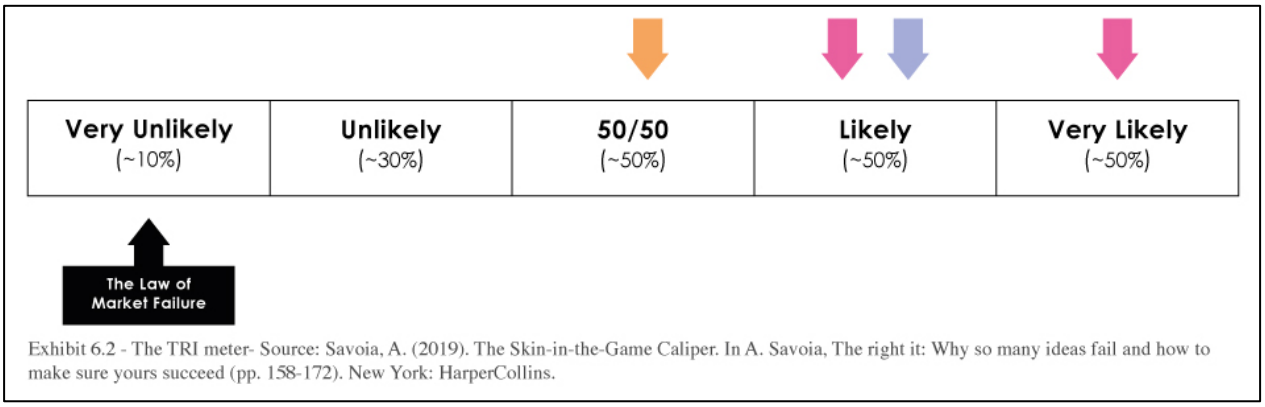

Exhibit 6.2 - The TRI meter- Source: Savoia, A. (2019). The Skin-in-the-Game Caliper. In A. Savoia, The right it: Why so many ideas fail and how to make sure yours succeed (pp. 158-172). New York: HarperCollins.

The map is divided into five categories from very unlikely (10% chance of success) to very likely (90% chance of success). The menacing black arrow at the bottom entitled "The Law of Market failure" points to very unlikely. It serves as a harsh reminder that most product ideas will fail. Thus, we need to collect enough data to turn these odds in our favor. The more encouraging, light-colored arrows on the top of the map demonstrate the chances of success of each pretotyping experiment. To complete the map, we must determine whether, and how well, the data we collect during the *validate* stream confirm the MEH. The question we should answer is: If the MEH reflects reality, how likely is it that this experiment will produce this data? Here are some guidelines (Savoia, 2019):

1. If new and real data provide positive information that significantly exceeds what the hypothesis foresees, the light arrow must point at very likely;
2. If new and real data meet or slightly exceed what the hypothesis foresees, the light arrow must point at likely;
3. If new and real data slightly fail to meet what the hypothesis foresees, the light arrow must point at unlikely;
4. If new and real data fail to meet what the hypothesis foresees by a considerable amount, the arrow must point at very unlikely;
5. If new and real data are ambiguous, unclear, or hard to interpret, or if the research process is somehow compromised, the light arrow must point to 50/50. Alternatively, if data are excessively dirty, the arrow must be discarded.

6.1.2.1 Test, measure and iterate

A single experiment is not enough to determine whether a given idea is likely to succeed in the market. Entrepreneurs must run multiple tests and validate multiple hypotheses. Unfortunately, there is no universal law declaring the absolute number of experiments everyone should perform. The choice depends on several factors, such as the amount of resources, like cash and time, that people will invest, how much certainty they need to make decisions, and whether the previous experiments led to conclusive results.

If the meter shows that a given idea is heading toward failure, entrepreneurs should go back to the *ideate* stream and use the information they have learned to revise it. It is important to stress that only arrows representing new, actual, and reliable data collected through thoughtfully designed and personally conducted experiments are allowed.

6.2 Channel work activities through a One Metric That Matters system (OMTM)

Entrepreneurs, intrapreneurs, and managers must know the tasks they need to complete, what the next milestones should be, and how they will measure progress. Today, data are incredibly accessible and easy to collect (Kaushik, 2009). People can use multiple digital tools and software to monitor and understand what is happening around their businesses (Croll & Yoskovitz, 2013). However, the ability to track vast amounts of information might lead many to confusion.

With so much data, it is simple to sink in a sea of numbers and look for the wrong lifeboat to survive. Innovation requires both focus and the ability to preserve it, but focus does not mean myopia. There is no single universal metric that entrepreneurs should follow throughout their careers (Appelo, 2019). However, as time progresses, there always tends to be one metric that becomes more significant than the others (Croll & Yoskovitz, 2013). In the world of big data and analytics, it is important to choose a particular indicator that can signal real progress in achieving the goal or solving the challenges at hand. Alistair Croll and Benjamin Yoskovitz refer to this measure as the One Metric That Matters (OMTM) (Croll & Yoskovitz, 2013).

Team members will monitor and analyze several numbers. Some will provide relevant information: these are the key performance indicators (KPIs) (Marr, 2012; Bauer, 2004)[26] which people will measure and report every day. Others will be stored away for future uses. Nevertheless, the capacity to track multiple things at once should not get everyone distracted (Kaushik, 2009). If there is one goal that is more important than the others, team members should concentrate on achieving that specific goal. This method allows them to execute more controlled experiments and compare their results more efficiently by focusing on a single metric above everything else (Croll & Yoskovitz, 2013). It allows a cross-functional team to work together toward a common objective.

The OMTM will continually change, depending on the particular stage of product development, the objectives to be achieved, and the problems to be solved (Appelo, 2019; Ellis & Brown, 2017). For example, if we focus on customer acquisition, the OMTM might be used to determine which distribution channels are more effective. Alternatively, if we want to improve customer retention, we might monitor the churn rate[27] as we experiment with new features, prices, or services. In other

[26] The KPIs are a series of qualitative and quantitative indicators that measure the performance of a given process. To be effective they should be easy to develop measure and understand, meaningful and related to precise goals, and systematically observed.
[27] The Churn Rate can be defined as the percentage rate at which customers stop subscribing to a given service.

words, the OMTM should change depending on the situation and help a team make informed decisions.

According to the book *Lean Analytics,* there are four main reasons why entrepreneurs should adopt a One Metric That Matters system (Croll & Yoskovitz, 2013):

1. *It answers the most vital questions they have*. Over time, team members will be trying to answer several different questions and juggling thousands of problems. Entrepreneurs need to identify the riskiest areas of their business models as rapidly as possible, which is where the most vital question lies. When they find it, they will know what metric to track in order to answer that question. That is the OMTM.
2. *It pushes them to draw a line in the sand and set explicit goals*. After they have determined the fundamental problem that they want to tackle, team members must set explicit goals. The OMTM helps entrepreneurs to create a shared definition of success.
3. *It sharpens and directs the focus of the entire organization*.
4. *It stimulates a culture of experimentation.* As we have seen in the *validate* stream, learning that comes from planned, methodological testing moves things forward. Entrepreneurs, managers, and team leaders must actively encourage and inspire everyone to experiment. The OMTM helps them achieve this outcome.

Yet choosing the metric to focus on is not enough. For example, imagine that someone named Harvey aspires to be a web influencer. He chooses to measure and optimize the "number of content items viewed weekly per person". It seems to be an excellent metric since it shows the value that Harvey's blog offers to its followers. However, that metric in itself is not sufficient. It does not answer the real question of how many content items people should view. Harvey needs to choose a number and set it as the target. If he manages to achieve it, then it is a success. If not, he should use the new information he learned and make some changes.

6.2.1 Vanity versus actionable metrics

Some companies pretend to be data-driven. Unfortunately, while many embrace the data part of the mantra, only a few focus on the driven aspect (Croll & Yoskovitz, 2013). A vanity metric[28] is a piece of data that team members cannot act upon and is not able to guide them on a given course of action (Ries, 2011). For example, if team members want to create the equivalent of a new

[28] The term has been coined by Eric Ries in *The Lean Startup*.

Facebook, “total signup” represents a vanity metric. This number can only grow over time. It does not help them understand what those users are doing or whether they are valuable to the grand vision. People might have signed up and then disappeared forever. “Total active users” is slightly better, but still represents a vanity metric because it will probably grow over time, unless the team undertakes a flawed strategy. In this situation, the real actionable metric would be “percent of users who are active.” This is a significant number because it shows team members the level of engagement their users have with the platform. When they alter the product by, for example, adding new features or changing the design, this metric should vary and allow them to ascertain whether those changes worked as anticipated. As a result, they can experiment, test, learn, and iterate. Alternatively, another metric to consider could be the “number of users acquired over a specific period.” This number can evaluate and compare the efficacy of different marketing strategies and distribution channels.

All the data, information, and insights entrepreneurs collect must inform, guide, and improve their business model and, ultimately, help them decide on a given course of action. However, actionable metrics are neither magic nor the solution themselves. They will not tell people what they should do but, rather, will advise them if their activities are on the right track to achieve their vision.

6.2.2 Action versus result metrics

Some teams might find it useful to separate action metrics from result metrics[29] (Appelo, 2019). Action metrics try to predict the future. For example, the present number of prospects in a sales funnel can provide an idea of how many new customers a given company might be able to attract in the future. Therefore, managers can pursue strategies to raise that number and expect a future increase in new customers. Result metrics describe the past. They can indicate a problem. However, by the time team members assemble data, it is too late. For example, by the time they measure a churn rate, customers who have vanished are not going to return. However, depending on the circumstances, this does not mean that one should not act on a result metric. Action metrics require several cohort analyses and the opportunity to compare groups of customers over time (Croll & Yoskovitz, 2013). Additionally, during the first days of a company, entrepreneurs may not have enough information and experience to determine how a metric relates to the others. The message included in this paragraph is different: When an entrepreneur decides to adopt a result metric as OMTM, he or she has to look for and monitor the action metrics that are connected (Appelo, 2019).

[29] They are also called leading and lagging metrics (Croll & Yoskovitz, 2013).

6.3 Test hypotheses through split testing and cohort analysis

Stalled growth is one of the most lethal and pressing problems that a company may face (Olson, Van Bever, & Verry, 2012). Entrepreneurs must learn how to continually engage customers, adapt nimbly to their ever-changing needs and desires, and turn them into a viable source of value.
Business Telling promotes a systematic, constant generation and testing of new ideas, or hypotheses, for product development. Moreover, Business Telling advocates for the use of NICE on user behavior to determine the winning ideas that drive growth. During the *manage* stream, team members must:

- perform iterative cycles of experiments with their agile prototypes to collect deep insights into user behavior and preferences; and
- use rigorous metrics to evaluate and act on those results.

6.3.1 Split testing

In 2012, a Microsoft employee had an idea about how to display the advertising headlines in Bing (Kohavi & Thomke, 2017). The development process would not have required much effort, but time was limited, and there were already hundreds of projects to realize. Therefore, the manager decided to put that idea on hold, and everybody quickly forgot about it.
After six months, an engineer came upon the idea and decided to launch a simple controlled experiment, a split test, to assess its effectiveness. He wrote the code, divided visitors into two groups, and showed each a given alternative. Within hours, the new headline variation was generating extraordinarily high revenue, triggering a "too good to be true" warning. Typically, such warnings have signaled a bug, but that was not the case. This simple change in design resulted in a 12% increase in revenue. It was an incredibly profitable idea that, before the test, almost everyone underestimated (Kohavi & Thomke, 2017).

Team members can use a split test to compare the performance of two or more value propositions. In particular, they set up two different experiences: the champion, (i.e., control) represents the current system, while the challenger (i.e., treatment) is a variation that endeavors to improve something (Kohavi & Thomke, 2017). Visitors and users are randomly assigned to the experiences, and team members monitor, analyze, and compare the results. For example, a website may display different features, user interfaces, or a diverse business model, such as an offer of free shipping on Zalando. Entrepreneurs can use split testing to learn how to optimize the aspects of the products, processes, or operations they care most about. People may believe that more substantial

investments result in more significant impacts. However, it rarely works that way: “Though the business world glorifies big, disruptive ideas, in reality, most progress is achieved by implementing hundreds or thousands of minor improvements” (Kohavi & Thomke, 2017).

6.3.2 Cohort analysis

As entrepreneurs build and test their agile prototypes, they will iterate constantly. Users who try the products in the first week will have a very different experience from those who will use them later. Cohort analysis can help teams understand how the various changes and improvements affect the customers’ behavior and overall experience (Ellis & Brown, 2017). It allows members to probe deeply into their NICE and discover why users stay or leave. This practice involves dividing customers and users into distinctive groups by a common trait. Each group is called a cohort, which is defined as “participants in an experiment across their lifecycle” (Croll & Yoskovitz, 2013). For example, a basic way to classify cohorts is by the time of acquisition, which refers to the day they signed up for or purchased the product. Team members can monitor the behavior of each group and compare them to see if the chosen OMTM is improving over time.

To understand the usefulness of cohort analysis, let us consider an example. Alex is running an online retailer, and every month he acquires 500 new customers. Exhibit 6.3 presents the average revenue per customer during the first months of the business.

Exhibit 6.3 - Average revenue per customer from January to May.

	January	**February**	**March**	**April**	**May**
Total number of customers	500	1,000	1,500	2,000	2,500
Average revenue per customer	$10.00	$9.00	$8.67	$8.50	$9.00

Alex cannot understand much from this table. Data only show a small decrease in revenues, followed by a recovery. However, since he is not comparing the behavior of new customers to that of older ones, it difficult to determine whether things are getting better.

Exhibit 6.4 – Cohort analysis

	January	**February**	**March**	**April**	**May**
New users	500	500	500	500	500
Total users	500	1,000	1,500	2,000	2,500
Month 1	$10.00	$6.00	$4.00	$2.00	$1.00
Month 2		$12.00	$8.00	$4.00	$2.00

Month 3			$14.00	$12.00	$10.00
Month 4				$16.00	$14.00
Month 5					$18.00

Exhibit 6.4 displays the same data, divided by the month in which a customer group began using the platform. The table enables Alex to understand that the situation is improving. Customers who joined in May are spending, on average, $18 in their first month, which is nearly twice the amount of those who joined in January. A cohort analysis presents a clear perspective and allows entrepreneurs to identify patterns against a customer's lifecycle (Croll & Yoskovitz, 2013). Google Analytics, Mixpanel, Kissmetrics, and Amplitude are tools that anyone can use to perform such analyses (Ellis & Brown, 2017).

6.4 Visualize and manage work with Kanban Boards

Toyota popularized the adoption of Kanban systems as a scheduling and inventory-control technique to achieve just-in-time delivery through increased collaboration and constant improvement (Liker, 2005). Nevertheless, we can apply the same practices and principles to different types of processes, such as the development of new features for a product, the design of reliable experiments for testing a business model, and the creation of content items for a social network. A Kanban system acts as a focal point for team members. It enables them to visualize, manage, and optimize their workflow (Benson & Barry, 2011).

There are various ways in which companies have implemented a Kanban system in their processes. The version we explain is the Personal Kanban: a two-dimensional board divided into vertical columns, each representing a work status or value stream (Benson & Barry, 2011). The sections below dive into how to correctly incorporate this technique.

6.4.1 Essential rules

Jim Benson and Barry D. Tonianne, authors of the book *Personal Kanban*, mention two rules that any Kanban system should follow: "visualize the work" and "limit the work in progress (WIP)" (Benson & Barry, 2011).

> *Visualize the work*. It is difficult to understand what nobody can see. People tend to focus their attention on the most visible parts of the work, such as deadlines, individuals involved, and the quantity of energy and effort needed to complete it. Unfortunately, reality includes

broader, unpredictable, and more indistinct elements, like environmental changes (Barringer & Ireland, 2015). When people can see and monitor work in its multiple contexts, everything becomes more explicit. They can control a physical record of what they want and need to accomplish. This more extensive view of their work promotes better and more informed decision-making.

Limit the WIP. This idea holds that people cannot and should not do more than they are capable of. Several factors limit individuals' capacities for work, including their passion and motivation, experience with the tasks at hand, available time, and the amount of work they are currently engaged in. The act of limiting WIP helps people focus their attention, work quickly and efficiently, and react calmly to change.

Personal Kanban is an evolutionary system. It promotes principles over processes, utilizing the idea that people should change and adapt their processes to the context, needs, and problems that arise. In Business Telling, team members can use a Personal Kanban as a dynamic, interactive map to visualize future goals and tasks, the work they have on progress, and what they have completed (Benson & Barry, 2011).

6.4.2 Building a Personal Kanban

The following Personal Kanban format is the version that most companies adopt (Benson & Barry, 2011). It has everything team members need when they start a project: It helps them visualize work, limit WIP, monitor workflow, and prioritize tasks. This basic design represents a baseline that individuals should first implement in order to understand how it works; eventually, they can tailor their approach to fit their reality.

6.4.2.1 Step one: Prepare

The approaches that participants utilize will change depending on the context. A Personal Kanban is a flexible and developmental tool. The more an entrepreneur uses it, the more it will be adjusted to match the situation at hand (Benson & Barry, 2011).

For the first Personal Kanban, people may use any surface that allows them to extrapolate the work they have in mind and visualize it in front of their eyes. The only requirement is to choose a place that everyone can easily access. A suggestion would be to start with a whiteboard or a canvas, some thick markers, and a pile of colorful sticky notes (Benson & Barry, 2011):

- Whiteboards and canvases offer the right equilibrium between permanence and flexibility;

- Diverse colors may be used to differentiate items and information.

As the work evolves, so will the Personal Kanban. The context, needs, problems, and goals will change. Team members and employees will come and go. Entrepreneurs will have to revise the way they monitor and manage work. They will create new tasks, design new experiments, add steps, and improve their workflow. They will continually erase and recreate the Personal Kanban.

6.4.2.2 Step two: Establish the value stream

A Personal Kanban allows team members to create a map of their workflow and visualize the value stream. The most basic format (see Exhibit 6.5) classifies work in *ready* (items and activities waiting to be processed), *doing* (work in progress), and *done* (completed work) (Benson & Barry, 2011). As we have already stated, this practice welcomes changes. A team's tasks and objectives might evolve in size, importance, and ramifications. Members should continually revise their value stream by adding, removing, or renaming the many columns they draw.

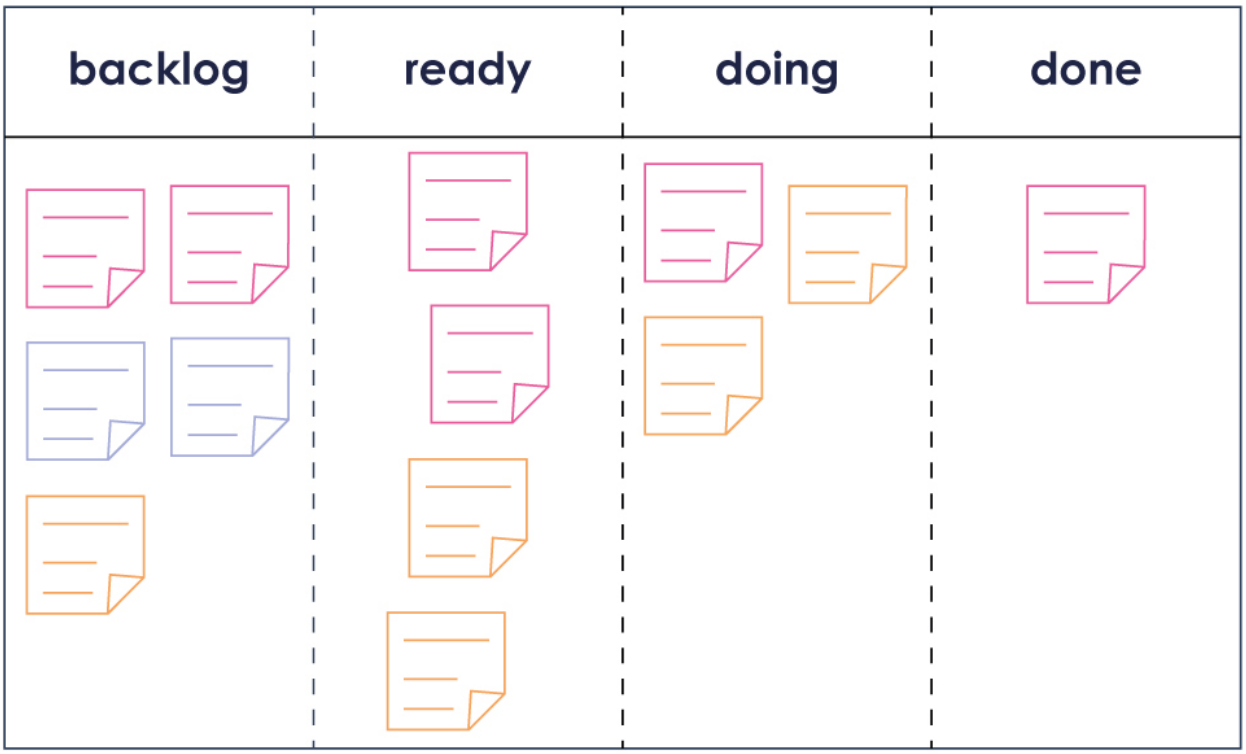

Exhibit 6.5 - Personal Kanban (basic format revised)

6.4.2.3 Step three: Establish the backlog

A backlog contains all the activities, tasks, and work that team members plan on doing. Jim Benson and Barry D. Tonianne define it as follows: "[The backlog is] the ton of bricks on our chest that prevents us from breathing, the monster beneath our bed that stands between us and a restful night's

sleep. It lurks behind every accomplishment, insisting: No time to celebrate, you've got so much more to do!" (Benson & Barry, 2011).

Backlogs are wish lists. They exist in many forms and versions, such as product backlog, content backlog, experiment backlog, and any other backlog of unscheduled work items. They include a list of ideas that we want to realize. There are many professional and digital tools that we can use to create and maintain backlogs, like Trello. Depending on what we choose, it is possible to manage and prioritize ideas according to different criteria, cluster them into particular groups, and ensure they fit the company's vision.

> A useful backlog that could assist entrepreneurs in the transition between the different flows of Business Telling is the Product Backlog. Team members could complete it by writing down User Stories and Experiment Stories. The former is a list of features that they would like to implement in a product. In particular, they are short and straightforward descriptions of given product features narrated from the perspective of the individuals that desire those features. The latter describes all the hypotheses and assumptions that team members want to test. Those stories cannot be considered complete until they lead to NICE, validated learning, and more informed decisions. Team members should play continuous attention to their Product Backlog's wish list. They should update the items and change priorities according to the new information they gather.

People cannot make informed and rational decisions if their ideas are ambiguous, uncertain, and chaotic (Savoia, 2019). Visualization techniques, such as the Personal Kanban, help individuals clarify, organize, and prioritize their thoughts. They can fill a backlog by writing down everything they have to do in order to achieve a given outcome. Then, team members determine the tasks they need to complete first and move them to the *ready* column.

6.4.2.4 Step four: Establish the WIP limit

No matter how passionate, motivated, and energetic we may be, sooner or later we will all eventually leave some work without completing it. The research of psychologist Bluma Zeigarnik supports the belief that the human brain needs closure (Denmark, 2010). In particular, the *Zeigarnik Effect* asserts that adults have a much higher chance of remembering interrupted and unfinished thoughts or actions over those that have been seen through completion (Bruke, 2010). Our brain is continually looking for patterns to process meaning, and it stays vigilant when it sees a missing piece of information. Incomplete tasks and activities demand attention, resulting in invasive

thoughts that limit our productivity and raise the odds of making a mistake. This cognitive need for completing fragmentary information causes us to brood over incomplete work.
The Zeigarnik Effect nourishes mental anxiety that could preclude sleep, influence health, and even become psychologically or physically debilitating (Denmark, 2010). As a result, we might become less productive, less efficient, and less effective. Visualizing work and limiting WIP minimize cognitive overload, reduce uncertainty, and stimulate follow-through.

When we are highly stressed and anxious, we tend to increase our workload (Bruke, 2010). In other words, we fight our fears by doing more things. However, this way of operating increases our stress level and the risk of failure. The more work we undertake, the less effective we become. Research consistently shows that no individual can achieve his or her maximum productivity while multitasking (Manhart, 2004). Maximum productivity is reached when we limit WIP and concentrate on the task at hand.

Team members should decide and set an arbitrary WIP limit. Most likely, they should not work on more than three features at a time (Benson & Barry, 2011). A common practice is to write down those limits in the headers of the columns (Anderson, 2010). As the items flow from one stage of development to the other, the columns fill up. Once a column is full (i.e., the WIP limit is reached) it cannot accept more items. An item can only be removed from the Kanban board when it has been completed. WIP limits strengthen team discipline and promote a constant focus on the flow of work (Croll & Yoskovitz, 2013).

6.4.2.5 Step five: Pull

Once team members have their Personal Kanban, they can determine a value stream, a backlog, and a WIP limit. Then they can start pulling their first tasks.

When individuals decide to pull a task, it means they have the capacity to follow it from beginning (*ready*) to completion (*done*). “The physical act of moving sticky notes across a value stream to change their status satisfies our brain’s need for closure. It’s a kinesthetic expression of completion, an antidote for the Zeigarnik Effect” (Benson & Barry, 2011).

6.4.3 A suggested practice: Enforce a Kanban system with some agile practices

6.4.3.1 Daily stand-up meetings

Founders, entrepreneurs, intrapreneurs, and innovation leaders have to build an environment where people can easily communicate and collaborate.

Daily stand-up meetings are a common practice of Agile Development (Schwaber & Sutherland, 2013). Team members can use them to keep everyone updated on each other's progress, remind each other about important goals, coordinate work, identify problems, and share critical concerns. Meetings usually take place in the morning, before people start to work, and are characterized by a given format. Jurgen Appelo suggests that participants should answer three different kinds of questions (Appelo, 2019):

1. What did I accomplish yesterday?
2. What will I accomplish today?
3. Are there any obstacles that are blocking my progress (or the progress of the team)?

Daily stand-up meetings have been successfully performed worldwide. In a Kanban system, entrepreneurs should tailor this practice to fit their specific contexts (Frish, 2016). For example, a highly cohesive team with a well-organized and clear Personal Kanban may not need to ask the three questions mentioned above (Anderson, 2010). The board may already display all the essential information about who is working on what. If team members see it regularly, they can notice what has changed since the day before and whether something is blocked. In such cases, meetings require a different format and should focus on the flow of work. A facilitator, a project manager, or a team leader can walk the board, from left to right, and review all the items. This person might demand a status update on some items or ask participants if any information is missing that other team members might not know. Particular emphasis should be reserved for those items that are stuck or delayed due to errors. Members can then discuss and decide who will solve the problem and how and when it will get resolved (Anderson, 2010).

6.4.3.2 Daily stand-up meetings in remote teams

The introduction of daily stand-up meetings in remote teams might pose some challenges, the most relevant of which is the synchronization of work status updates (Appelo, 2017). Members might be distributed across different geographic regions and multiple time zones. It would make sense to ask the Italian designer reporting for work at 8:00 a.m. what he or she will do that day. However, posing the same question during the meeting to a team member who is an engineer in China, where it is 3:00 p.m., is not useful. Additionally, the team cannot have a physical Personal Kanban that everyone can see, manage, and understand. Because of these issues, remote teams might consider daily stand-up meetings a waste of time (Appelo, 2017). However, it is important to state that such activities can strengthen, optimize, and stimulate team performance, grow relationships, and create

a shared team-working culture. They can work as a strong incentive to socialize and talk about things that matter and as a reminder not to postpone such discussions for more than one day.

Solving the synchronization problem. Peer-to-peer communication is effective, but team members who operate from different geographic regions can successfully communicate their work to each other through asynchronous updates[30]. They can use slack bots and other digital tools as a reminder to update peers at a reasonable hour in their time zone.

Solving the board visualization problem. Remote teams are unable to share a physical room where members can monitor and update the Personal Kanban board. Online software can help them visualize and manage their work using the concepts of boards, columns, and cards. Trello, for example, is intuitive and user-friendly; people can use it for almost everything.

6.4.3.3 Perform an Agile Retrospective to reflect and work on the Improvement Backlog

The twelfth principle of the Agile Manifesto states: "At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly" (Beck, et al., 2001). The Agile Retrospective is a practice that people can adopt to analyze the way they work and become continually better at what they do (Kerth, 2013). It is executed in the form of a meeting in which team members inspect their work, share feedback, and create a plan for improvements to be enacted in the future (Schwaber & Sutherland, 2013). They reflect on how they can achieve higher levels of efficiency and effectiveness. In other words, the purpose of the Agile Retrospective is to:

1. Inspect, discuss, and analyze how work went;
2. Identify and order the major items that went well and potential improvements;
3. Create a plan for implementing those improvements.

Kanban is an evolutionary system. Entrepreneurs could adopt the Agile Retrospective technique to generate improvement ideas and pursue process tailoring and innovation. The meeting can be structured into eight steps (Appelo, 2019):

First, *Opening*. Team members might find it useful to start their meetings with a small ritual to help participants enter into the correct mindset. For example, they could structure an introduction where everyone has to confirm their commitment to trust and transparency

[30] Companies such as Gitlab (GitLab, 2019), Zapier (Schreiber, 2019), and Buffer (Gonda, 2019) have embraced asynchronous communication.

during the discussion. Participants should be open to sharing feedback, doubts, and concerns without blame or retribution (Kerth, 2013). They could print a manifesto declaring the chosen retrospective rules and ask everyone to sign it. Alternatively, they could recite the Prime Directive as written by Norman L. Kerth in the book *Project Retrospectives*: "*Regardless of what we discover, we understand and truly believe that everyone did the best job he or she could, given what was known at the time, his or her skills and abilities, the resources available, and the situation at hand"* (Kerth, 2013).

Second, *Collective reflection*. Team members look at the items in their Improvement Backlog (if any). This contains all the improvement suggestions that emerged in previous retrospectives. Here, participants analyze and reflect on these items to determine whether any progress has been reached. Hopefully, the answer is affirmative. Otherwise, reprioritization may be required.

Third, *Feedback and information.* Team members share fresh feedback and personal opinions about their work. An easy but powerful exercise explained in *Getting Value out of Agile Retrospectives* by Luis Gonçalves and Ben Linders is to ask given questions and collect the answers on a board (Gonçalves & Linders, 2013). The trick is to choose questions that allow team members to gather insights into the most urgent issues and recognize potential improvements. For example, participants may be asked to answer the following (Kerth, 2013):

1. What did we do well, which if we do not discuss we might forget?
2. What did we learn?
3. What should we do differently next time?
4. What still puzzles us?

This activity is simple yet very effective in visualizing issues and potential improvements (Gonçalves & Linders, 2013). Team leaders should adapt these questions to the needs that arise and the context in which they operate. In the end, the board should be covered with colorful sticky notes, and everyone should be able to understand everything that has been written.

Fourth, *Organization*. Team members analyze and categorize all the input and information. They will probably see that many participants share the same feedback and concerns. The purpose of this stage is to group answers that share a common thought and visualize

convergence on the insights. Participants should carry out this clustering and collaborative exercise until they have reached consensus on all categories.

Fifth, *Celebration*. Team members identify everything that went well (i.e., the most relevant answers to the first question). This stage is useful to set a positive tone that might last until the end of the retrospective.

Sixth, *Matching and learning*. Team members try to match the new input with what they reported on their Improvement Backlog during the past meetings. They may determine whether they have more insights on issues that were already on the list. Next, they add the new impediments, frustrations, and obstacles to the backlog. Everyone should work to maintain a respectful, constructive atmosphere.

Seventh, *Prioritization.* Team members discuss and decide which issues they should address before the next retrospective. They are entirely free to choose what they should get done, the desired end state, and to pull any item from the improvement backlog to the work in progress category. It is important that they limit the number of issues they can work on. Many people would prefer to solve many problems at once. However, experience shows that most teams and individuals are not capable of doing that[31]. People should remain modest and pick no more than three issues to address, then start working on them immediately.

Eight, *Closing.* Team members should conclude the retrospective in an engaging and encouraging way. They could set up a short ritual to proclaim the end of the meeting and spur everyone to focus their attention on the next tasks they should get done. An example would be to evaluate the effectiveness of the retrospective by creatively assigning the grade through the names or events of famous Hollywood characters.

Agile Retrospectives can help teams learn and understand how to improve the value they generate to customers and the company. They can make the organization faster, more efficient, and innovative (Gonçalves & Linders, 2013). Entrepreneurs should adopt different practices, techniques, and exercises according to the specific issues at hand, the mindset of the team, and the goals they want to achieve. If we are in doubt of what we should do, there is only one answer: Try something new.

[31] See the WIP explained in Chapter *6.1.1 Essential Rules.*

6.5 From “manage” to “decide”

Successful entrepreneurs have made history. When we watch their stories in films or read about them in books and magazines, the plot is almost always the same. First, a hero has an epiphany and recognizes an opportunity. We understand his or her personality, discover how he or she managed to be in the right place at the right time, and empathize with the decision to start a business. Then a professional montage occurs. Several years of glee, despair, and commitment are summarized with just a few minutes of time-lapse photography or narrative. The hero finds soulmates who share his or her beliefs and builds a team, sticks a pile of post-it notes on canvases, and prepares some PowerPoint presentations. At the end of the montage, the founders stand proudly on a podium of glory. We think we understand the reason behind their success, but we are wrong. Unfortunately, the real work that decides an innovation's victory or failure is not displayed by that short montage. The great idea, the mapping of canvases, and the PowerPoint presentations represent a tiny percentage of entrepreneurship. The vast majority is the difficult and sometimes painful work measured by innovation accounting (Ries, 2011): the choice of which customer segment to target, product improvement and prioritization decisions, and an uninterrupted sequence of experiments that can demolish the grand vision.

However, there is one particular decision that stands out above all others. It is the most challenging, the most time-consuming, and the greatest source of doubt for entrepreneurs (Ries, 2011). Everyone must sooner or later face this fundamental question: Should we pivot or persevere?
To learn what occurs during the montage, we have to understand what a pivot is, why it is required, and how to do it. That is the subject of the *decide* stream.

7. DECIDE

Every entrepreneur, manager, and intrapreneur eventually confronts a major challenge in developing a successful innovation: deciding whether to pivot or persevere (Ries, 2017). All the approaches, tools, practices, and techniques discussed in each stream seek to help team members answer a seemingly simple question: *Are we making adequate progress to believe that our Market Engagement Hypothesis is correct, or do we have to make a significant change?* That change is called a pivot: a structured course correction designed to test a new fundamental hypothesis about the product (Ries, 2011).

Business Telling aims to foster and channel individual creativity into its most productive and efficient form. There is no worst enemy of creative potential than the erroneous decision to persevere.

7.1 Pivot requires courage

A pivot may be the only way to heal an ailing strategy. However, most people are reluctant to undertake such a change. There are three main reasons why this happens (Ries, 2011). First, vanity metrics deceive entrepreneurs. They spur them to reach lavish but erroneous conclusions and to live in their imaginary world. They deprive team members of the urgency to change. When people have to pivot against their judgment, the process is much harder, requires more time, and leads to a less decisive outcome. Second, entrepreneurs who develop a vague, ambiguous hypothesis will never experience a real failure, and will never hear the call to embark on the drastic change that a pivot requires. Third, entrepreneurs are afraid. They fear that the vision, which the whole team believes in, might be deemed wrong without having been given a real chance to prove itself. Therefore, they oppose creating pretotypes and agile prototypes, split testing, and other practices to validate hypotheses. Ironically, this fear raises the risk because testing does not happen until the vision is realized. However, when that time comes, it may be too late to pivot.

Entrepreneurs need to confront the beast of failure and be willing to lose. Designing a successful innovation is not about cranking out more products, widgets, or features. It is not about persevering on a given business model merely because the team believes in it. Innovation involves aligning everyone's efforts with a working strategy to create, deliver, and capture value. Pivot helps us to find a path toward growing a sustainable business (Ries, 2017).

7.1.1 Examples and types of pivots

The purpose of experimentation is to collect enough data to evaluate whether the current strategy is working. If each new experiment leads to better and more promising results, team members should persevere with their improvements. In contrast, if customers show indifference toward the product (or the changes), or share only negative feedback, it is time to pivot: to change the existent strategy without altering the grand vision (Ries, 2017).

Today, Wealthfront is a successful investment advisory company that seeks to disrupt the mutual fund industry. However, Wealthfront today looks very different to how it looked in the early stages. Wealthfront's original incarnation was as an online game called kaChing (Milstein, 2010). The founders conceived of it as a fantasy league for inexperienced investors. Users could create a virtual trading account and build a portfolio based on real market data, yet without the need to invest real money. The purpose was to find the brightest stars on a night's sky: novice traders with ample market insight, but without enough resources to refine their skills (Milstein, 2010). Wealthfront's founders did not want to work in the gaming business per se; kaChing belonged to a complex strategy designed to achieve a broader vision. They trusted that their platform would become increasingly advanced and would finally allow users to serve and disrupt existing professional fund managers (Kincaid, 2009).

By adopting the techniques employed by the most accurate evaluators of money managers, kaChing developed an instrumental technology able to identify the so-called "trading geniuses" (Miller, 2009). The company could assess the returns investors had generated, the risks they had taken along, and how consistently they had performed relative to their original strategy. Therefore, fund managers who attained high returns through thoughtless and hazardous gambles (i.e., investments wildly beyond their knowledge) would be ranked lower than those who understood how to win the market skillfully. The platform achieved tremendous early success, drawing more than 450,000 users shortly following its launch (Miller, 2009). However, this number was only a vanity metric. Many businesses would have praised that success, but Wealthfront did not. Its critical assumption was that a significant portion of "trading geniuses" would emerge.

When kaChing was ready to release its paid financial product, only a small percentage of gamers had qualified themselves as worthy of managing real assets. Moreover, after release, the conversation rate of users into paying customers was disheartening (i.e., close to zero). Team members fought valiantly to improve and optimize the product, but there were no signs of recovery (Miller, 2009). They had to decide whether to pivot or persevere.

With everyone present, the team analyzed the information that members had learned, discussed how the future should look and decided that kaChing could not persevere as it existed: The current strategy was flawed. The company decided to pivot, leaving the gaming business behind and concentrating on offering a service that would enable customers to invest with professional managers. As co-founder and CEO Andy Rachleff recalls, “what we really wanted to change was not who manages the money, but who has access to the best possible talent. We'd originally thought we'd need to build a significant business with amateur managers to get professionals to come on board, but fortunately it turns out that wasn't necessary” (Miller, 2009). This pivot might seem a drastic change at first glance; the company altered its positioning, name (from kaChing to Wealthfront), and its key partners. However, the kernel remained the same. The team had developed a valuable and accurate technology for assessing managers' efficacy and this became the foundation on which the new business was created.

A pivot does not throw away everything that team members developed before. A pivot combines what a team has built with what they have learned to uncover a new, positive direction (Ries, 2011)

7.1.1.1 Pivoting and Business Model

Entrepreneurs always have a grand vision (Barringer & Ireland, 2015). To solve their problems, achieve their objectives, and realize that vision, they must outline a strategy. Unfortunately, that

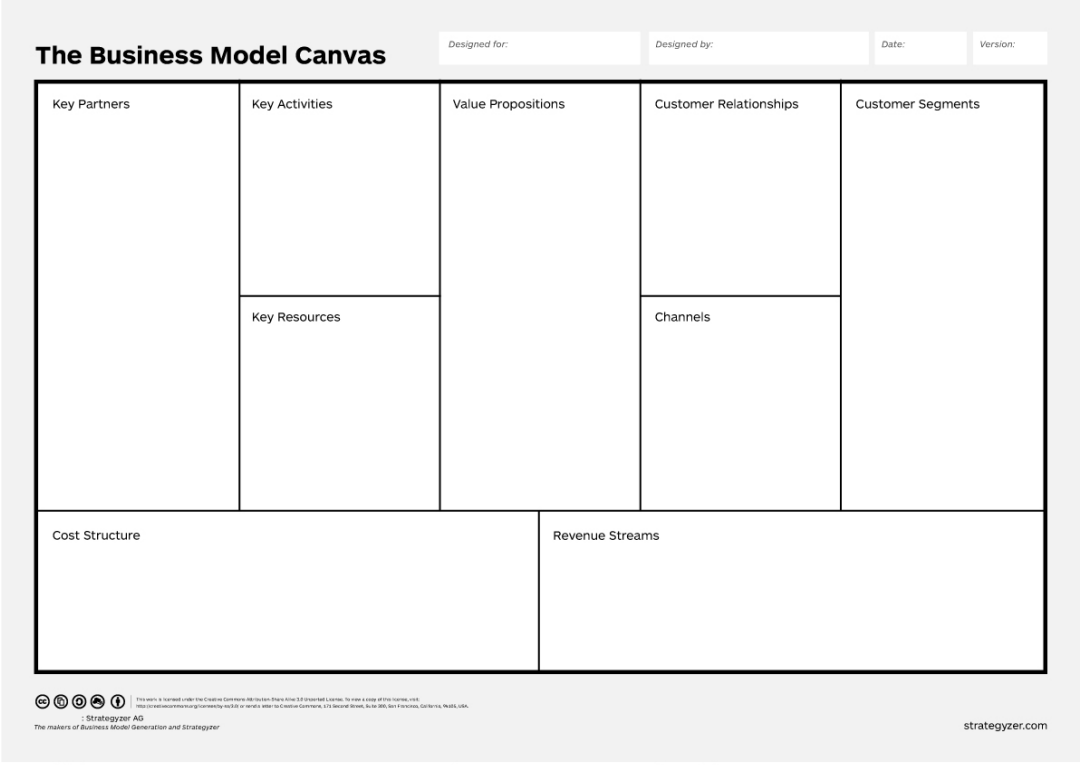

Exhibit 7.1 - Source: Strategyzer. (2019, December 20). Resources. Retrieved from Strategyzer: https://platform.strategyzer.com/resources

strategy might reveal some flaws that must be corrected. The signs are negative customer feedback, a reduction in the efficacy of product experiments and improvements, and the general feeling that a team's efforts should be more productive. Whenever they observe these symptoms, a pivot should occur. In Business Telling, a pivot is a particular type of change designed to test a new, different Market Engagement Hypothesis about the product, or business model.

In *Business Model Generation*, Alexander Osterwalder and Yves Pigneur define a business model as "the rationale of how an organization creates, delivers, and captures value" (Osterwalder & Pigneur, 2010). The business model illustrates the relationship between the vital elements of a company: customers, offer, infrastructures, and financial viability (Blank & Dorf, 2012). Just as an architect's project guides a building construction, a business model guides an entrepreneur in developing a successful business. Several methods and techniques can help them to complete this task, including the *Business Model Canvas* (a tool proposed by business theorist and author Alexander Osterwalder; Exhibit 7.1; Osterwalder & Pigneur, 2010) and the *Lean Canvas* (an adaptation offered by author and consultant Ash Maurya; Exhibit 7.2; Maurya, 2012).

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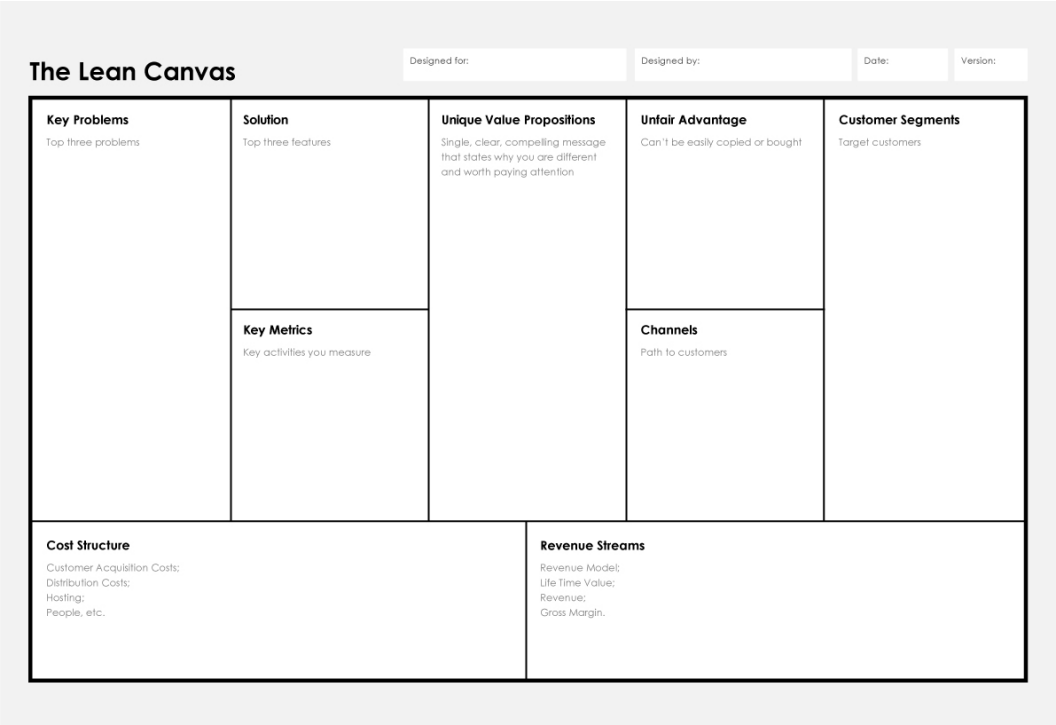

Exhibit 7.2 - Source: Maurya, A. (2012). Running lean: iterate from plan A to a plan that works. " O'Reilly Media, Inc.".

Both are well-known and very useful in sketching the most vital elements of a company[32]. A pivot recognizes that some of these elements are flawed and allows entrepreneurs to adjust their trajectory. Some examples are (Ries, 2011):

> *Problem/Opportunity pivot.* As team members release their product, interact with customers and users, and analyze NICE, they may discover that the problem they are trying to solve is no longer important. However, because of this enhanced knowledge, they often unearth other related problems that can be addressed. Sometimes, solutions involve little more than repositioning the current product, while in other cases, team members might have to create an entirely new solution.
>
> *Customer segment pivot*. A given product may be capable of solving crucial problems for real customers, but those customers may not be the ones that the team members had originally planned to target. Hence, the market engagement hypothesis is partially confirmed, targeting the right problem, but for a more diverse set of customers than originally anticipated. Entrepreneurs should focus on the more appreciative segment and optimize their product for that particular segment.
>
> *Value proposition pivot*. A product offers an aggregation of benefits and features to customers and users, and some may get more traction and interest than others. In such scenarios, entrepreneurs should consider zooming-in (i.e., focus) on those particular features. Of course, the reverse scenario may also occur, and entrepreneurs must be willing to adapt their product and add additional characteristics.
>
> *Value capture pivot*. To survive, companies must capture the value they generate. There are several ways to do this. For example, entrepreneurs can structure a subscription business model (e.g., Netflix), or collect money through advertising (e.g., Facebook). These practices are often referred to as monetization or revenue models (Osterwalder & Pigneur, 2010) and constitute an intrinsic part of a product hypothesis. Often, altering how a company captures value has significant consequences for the entire business (Maurya, 2012).
>
> *Distribution channel pivot*. Companies interface with and eventually deliver value to customers in a variety of ways. For example, foods and beverages are bought in grocery stores, cars in dealerships, and software from trusted online stores. This choice often

[32] The Lean Canvas is specifically designed to help startups.

determines the price, features, and competitive scenario of a product. In a distribution channel pivot, entrepreneurs recognize that they can deliver the same solution through a diverse channel with higher effectiveness: They can move from an application to a platform (or vice versa), alter their growth strategy, or establish new key partnerships.

Academia overflows with successful pivot stories. Examples include PayPal, which began as a money transfer mechanism for Palm Pilots; Netflix, which went from mailing DVDs to offering online streaming; and Groupon, which started as a collective activism platform called “The Point”. Entrepreneurs should analyze their NICE, find the flaws in their original hypotheses, and try to correct them as soon as possible. If no pivot seems to work and results are poor, the other remedy is to abandon the current strategy and jump to the *explore* stream. Business Telling has no end or beginning. It promotes a continuous ride from one stream to another and prevents entrepreneurs, managers, and innovation leaders from resting on their laurels. Innovation is the result of a developmental process in which several practices, approaches, and techniques merge together in a beautiful, ever-changing mosaic.

CONCLUSION

Digital transformation affects each and every aspect of the modern economy. No organizations, public companies, or even individuals are untouched by this phenomenon and its effects. Technological advances are continually shaping the way people live and work, and competition becomes fiercer day by day. Customers are more demanding now than they were five years ago. They are more difficult to please and turn immediately to other companies if they do not feel satisfied. Digital transformation imposes a harsh change of direction. Traditional and standard models are no longer suitable for managing innovation and pursuing the many opportunities that arise—they are slow, closed, and can be too expensive.

The challenge of knowing how to manage and foster innovation is increasingly felt by companies. Traditional cascading approaches must leave room for more comprehensive philosophies that encourage continuous iteration, incremental value generation, customer involvement, empathy, and team empowerment. To make the most of the opportunities available, entrepreneurs, managers, and intrapreneurs commit to modern disciplines such as Design Thinking, Lean Startup, or Agile Development. Nevertheless, failure can still come knocking on the door. Academia tends to consider all these methodologies as stand-alone tools, eventually raising barriers and limitations to innovation. The reason is clear: There is no single framework, discipline, or technique capable of tackling every problem, obstacle, and need that companies encounter during their life cycles. Innovation requires flexibility, responsiveness, and dynamism. Entrepreneurs should continually tailor their strategies to the problems and needs that arise; they must learn how to manage the never-ending switch between "*What is required now?"* and "*What do we have to do in order to achieve it?"*

Innovation is a major, ever-changing topic that requires continuous analysis and research. Today, individuals share a sincere need to understand if and how to correlate the various practices, tools, and techniques that are popularized in academia. There is a significant demand for clear guidelines and new, comprehensive, and flexible models. Business Telling serves this purpose and provides readers with a common thread between different methodologies that have traditionally been managed separately. It advocates an iterative, flexible, and dynamic approach that can be followed by managers and entrepreneurs to exploit the many opportunities that characterize the digital era. Business Telling supports an evolutionary mindset and the idea that people's approaches to business development should evolve with the company and its context. In the model, innovation is the result of a vortex, in which five streams swirl together in an endless, ever-changing fashion.

Exhibit 8.1 – The logic, tolls, and methodologies behind Business Telling.			
	Objective	**Main concepts and tools**	**Methodologies**
Explore	Map the context, empathize with customers, identify problems.	Journey map; Customer interview; Ethnographic research; Personas.	Design Thinking, Design Sprint.
Ideate	Generate hypotheses for solutions.	Customer's job to be done; Brainstorming.	Design Thinking, Design Sprint.
Validate	Design experiments and use NICE to validate critical hypotheses.	NICE; MEH; Pretotype; Agile prototype.	Lean Startup, Agile Development.
Manage	Manage workflow and iterate the product toward the optimal.	Skin-in-the-game caliper; TRI meter; OMTM; Split test; Cohort analysis, Kanban.	Lean Startup, Agile Development, Growth Hacking.
Decide	Decide whether to persevere with the current strategy or to pivot.	Business Model; Pivot.	Lean Startup.

The thesis applies to all kinds of ideas in the digital era: new products (or new features and characteristics destined for existing products), new services (or for novel offerings to support existing services), and new businesses or organizations of all types. It is designed to help people with big opportunities, problems or ideas who wish to start in the right way. Business Telling offers innovation-seekers a ship that they can take to reach an island (i.e., innovation). The various approaches, tools, and practices are the sailors, each focused on a given task. In our case, Design Thinking explores the needs of customers and helps produce ideas for better solutions. Lean Startup tests the generated ideas in the simplest, cheapest, and fastest way and validates whether a given solution works to solve a problem. Agile principles reduce cycle times, foster continuous learning, and deliver customer value regularly.

In summary, I believe that this thesis offers an important contribution to the extant literature regarding the development of innovative ideas based on three primary dimensions:

- Position. The market is moving toward a new era in which the integration and exploitation of digital technologies have opened a vast sea of opportunities. Successful entrepreneurs make headlines, and their stories inspire others to bring their own ambitions to life.

Unfortunately, any success is followed by far too many failures: software removed from stores mere weeks after being uploaded, online platforms lauded in the press and forgotten a few months later, and promising new technologies that end up never being used. The myth of perseverance can trick people into believing that everything can be achieved if one tries hard enough. People impulsively commit to developing their ideas, but no amount of money, time, or effort can make the wrong solutions work. The success of a product does not depend on the perseverance, passion, and commitment of team members; it depends on customers and on whether they decide to use it or not. Digital transformation requires a greater coherence between a team's development efforts and the real needs of the market. Organizations must improve their ability to recognize, evaluate, and pursue the right opportunities. Business Telling serves this purpose and allows managers and entrepreneurs to save time and resources while minimizing the risk of failure.

- Correlation. Business Telling identifies a common thread between various approaches that have been managed separately. Design Thinking, Lean Startup, and Agile are all useful in product development and help managers, entrepreneurs, and intrapreneurs move from one to another without losing sight of their grand vision.

- Clarity. Business Telling recognizes the strengths and specialties of the aforementioned methodologies and defines their specific areas of expertise. Design Thinking prompts teams to broaden their perspectives and dive deep in the lives of customers. The *explore* and *ideate* streams rely on customer-centricity, collaboration, and empathy as the core of problem solving. The goals are to understand the present world and imagine the future. Lean Startup encourages entrepreneurs to judge their progress in terms of validated learning. The *validate* stream focuses on rapid experimentation and collection of new, relevant, trustworthy, and significant data (NICE). Team members have to determine if a problem is worth solving and if it is possible to build the required solution. Agile principles help entrepreneurs minimize time-to-market, deliver customer value regularly, and pursue continuous learning. The *manage* stream seeks to get ideas to customers quickly, understand how these ideas are received, and iterate frequently. Making things allows a team to learn, grow, and optimize their products. Eventually, managers and entrepreneurs encounter a major question: whether to persevere, pivot, or kill the current strategy. This is the subject of the *decide* stream, supported by the Lean Startup methodology.

Business Telling has piqued the interest of several managers, innovation experts, and wannabe entrepreneurs who have expressed curiosity in reading this thesis and have provided their contact information to be sent the finished work. Although this alone does not prove the efficacy of the model, it reveals a real need felt within the entrepreneurial world. Currently, the market has no clear answers, and people are constantly looking for new ways to stimulate innovation.

Business Telling can unlock a vast arsenal of entrepreneurial potential. It arms the individuals with the right mindset, principles, and tools needed to fight the beast of failure lurking behind the digital transformation. Business Tellers declare assumptions explicitly and test these rigorously to uncover the truth behind a project's vision. They side with neither the defenders of quality nor the champions of reckless advance; instead, they acknowledge that speed, experimentation, and quality are allies in the pursuit of continuous innovation. Business Tellers face failures, disillusions, and setbacks with honesty, humility, and learning, not with recrimination, finger-pointing or blame. Moreover, they evade the drive to slow down, chase perfection, and hide within the shelter of prevention. Instead, they minimize time-to-market by avoiding excess work that does not guide learning.

Business Tellers commit to creating, managing, and leading innovative organizations with a mission of building sustainable value and changing the world for the better.

Most of all, they welcome change as the primary means to grow.

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