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GUEST Methodology:

Analysis and development of new business models related to startups.

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Abstract

In the current era of globalization, the demand for startups is on the rise. The reason is that people want to introduce new technologies into their lives, find non-standard solutions to today's problems.

Of course, startups play a big role in this. They are trying to find a new solution to a problem in the market and make it work. But not all startups are successful. As stated by a Harvard Business School study, 75% of startups fail.

According to traditional views, every entrepreneur must first write a business plan - a document describing the scope of the business opportunity, the problem to be solved, and the solution proposed by the new venture. Typically, a business plan includes a five-year revenue, profit, and cash flow plan.

Ensuring a successful startup victory depends on many factors. But there is a more important factor: finding and using methodologies suitable for startups. This results in fewer lesions than with traditional methods.

In this thesis, I will talk about how to apply several business methodologies and their differences from each other. Besides that, I will also try to highlight the strengths and weaknesses of the GUEST methodology using the Amazon Green Community startup as an example.

CONTENTS

CHAPTER I	4
Startups	4
1.1.What is a startup?	4
1.2.Distinguishing characteristics of a startup	6
1.3.Funding for startups (Investments)	8
1.4.What exactly isn't a startup?	10
1.5. How to create a startup?	11
1.6.Conclusion	12
CHAPTER II	13
Business Methodologies	13
2.1. Lean Business Methodology	13
2.2. Lean Startup Methodology	18
CHAPTER III	23
GUEST Methodology	23
3.1. Definition of GUEST	23
3.2. Go	25
3.3. Uniform phase	27
3.4. Evaluate Phase	29
3.5. Solve and Test phase	30
CHAPTER IV	32
4.1. Case Study: Amazon Green Community	32
4.2. GUEST Methodology Analysis	42
Conclusion	59
References	61
Annex 1	63
Annex 2	65

CHAPTER I

Startups

Without presumption, I observe that entrepreneurs in the twenty-first century are practically bathing in glory.

Startups are ubiquitous. And if you keep up with current events, it's quite conceivable that you already have an image of what a startup looks like. Frequently, we see a group of guys starting an amazing firm out of their father's garage. And, of course, they devised an entirely novel business approach.

Although the concept is relatively simple, it is not far from the truth. A true startup includes far more features than you might assume. Many individuals believe that a startup is simply a newly formed business, and that any newly formed business has the right to proudly wear the appellation of startup.

However, over the last five years, a growing number of business schools worldwide have developed a distinct academic definition of a startup and its essence. Today's widely accepted definition of a startup states that not all new businesses can or should be classified as startups.

1.1. What is a startup?



A startup is a business structure founded on revolutionary discoveries with the goal of resolving a specific problem through the provision of a novel product or service in the face of considerable uncertainty.

Business owner and well-known business geniuses define a startup as a distinct culture, a business-building mentality founded on an inventive idea that alleviates a specific target audience's crucial pain points.

1.1.1. What is the distinction between a startup and a newly formed business?

I'll provide you with two definitions to help you comprehend the distinction.

In simple terms, a startup is:

A startup is a temporary organizational structure created with the goal of developing a replicable and scalable business model. It is a type of company that seeks to make money and expand rapidly through the development of business concepts from the bottom up.

A firm or business is a self-contained entity that already possesses a replicable and scalable business plan. This form presupposes that you are already familiar with the method of earning and can confidently perform it.

I believe it's self-evident that startups are looking for a viable business model, whereas established businesses already have one and are successfully adopting it. And this distinction has an impact on the character and requirements of both sorts of organizations.

When I hear the term "startup," my mind quickly conjures up an image of a group of eager 20-year-old web engineers settling someplace in the San Francisco Bay area. They sip beer in broad daylight, appreciating the world in which they are fortunate to live, and reminisce about the last weekend spent socializing with fellow venture capitalists. As a result, when I hear someone refer to a small business as a startup, such as a restaurant, cafe, hairdresser, or dentist, I literally feel terrible.

The distinction between a technology startup (or any other, not necessarily technology-related) and a new commercial endeavor is significant. In particular, how their founders view the importance of business growth.

To summarize this description, I will add that a startup does not require technological innovation or invention. On the contrary, it is devoted to developing innovative business concepts. By the way, the term "startup" contains no reference to technology.

Let me give you one of my favorite stories of a non-tech start-up that originated in the US back in the 1950s in the restaurant industry. Its leaders were hunting for a reliable and scalable business approach. McDonald's is a firm that has grown to be one of the largest in the world.

However, a restaurant cannot be considered a startup, can it? As it turns out, this is not always the case. This is the primary distinction between McDonald's and other restaurants. McDonald's sought a way to scale and, through an inventive strategy, created a never-before-seen marketing strategy and built an empire of hundreds of outlets worldwide. This is what established them as a startup during their formative years.

And if a restaurant is launched to serve clients using a well-defined model (Customer - Menu - Order - Payment), with no innovation in terms of business model, scaling, or growth, the restaurant is not a start-up. It is merely new business.

1.2.Distinguishing characteristics of a startup

Not all new businesses are classified as startups. Enterprises with limited growth potential in terms of customer base, profitability, and product are not considered start-ups. For instance, a new restaurant, a dry cleaner, or a tire shop are highly improbable candidates for the term "startup." Nevertheless, as I previously stated, there are exceptions.

1.2.1. Growth

What distinguishes fast-growing firms from others is that the term "startup" has an established meaning. There would be no need for a precise definition if all firms were basically the same and their success was determined purely by the efforts of their founders or by luck. Our discussion would then focus on the most and least successful businesses. In fact, a startup's genetic makeup differs significantly from that of a regular business. When it comes to creating Google, the company's founders didn't just work hard and get lucky. What differentiates startups from other businesses is the relationship between supply and demand. A startup creates a product that targets a largely untapped market.

Startups understand the optimal strategy for developing the product the market desires and how to deliver it to customers, thereby satisfying their needs. This is the driving force behind rapid growth.

1.2.2. Innovative breakthroughs

A new firm is termed a start-up if it creates fresh value for its clients through its product or service. It doesn't have to be just one thing or service that is revolutionary.

Numerous startups fail to differentiate themselves through the use of new goods. However, they:

- supply an existing product via numerous novel channels made available by the Internet (mobile applications and other online tools);
- build a similar business model that is more profitable;
- function as aggregators of existing products and services.

1.2.3. Uncertainty

Innovation is extremely unsafe. Numerous internal and external factors influence a startup's success. And, because the majority of companies are founded on hypotheses, their long-term viability is always dubious. A startup is inherently dangerous and unknown. When considering the uncertainty that surrounds companies, I'm reminded of Elon Musk's quote: "Starting a business is extremely difficult. It's as though you're staring into the abyss while nibbling on a piece of glass. "

1.2.4. Solution to the issue

What makes a startup different from a small business is how innovation is done.

A startup is made up of an idea that wants to change the world, make it easier to reach a goal, or solve a specific problem. Startup ideas are always on the lookout for new ways to help the world by solving a problem in a new way. Great examples of startup companies that addressed real-world issues include the following:

Uber was launched in response to a problem with insufficient taxi service and lengthy wait times for pickups. They brought everything up to a single, high standard, simplified the process of ordering and paying for taxis, and significantly reduced wait times.

AirBnB is another example. The issues that this service addressed were the high cost of hotels and the lack of authenticity and spirit in a city when staying in a hotel. They created an opportunity to live like a local and save significantly on lodging.

1.2.5. Profitability

A lot of start-ups spend more money than they make in the early stages. This is because they are working on new products, testing them, and running marketing campaigns. This frequently necessitates external funding. The required funds can be obtained in a variety of ways:

- traditional lending to start-up businesses;
- government small business lending programs administered by local banks;
- grants from non-profit organizations or local governments; business incubators and accelerators (which can provide both capital and useful recommendations);
- friends and family members;
- venture financing (in exchange for financial support, you will give up some part of the control and shares in the company).

Note: Facebook did not earn a profit until 2009, five years after Mark Zuckerberg founded the company as a Harvard University student.

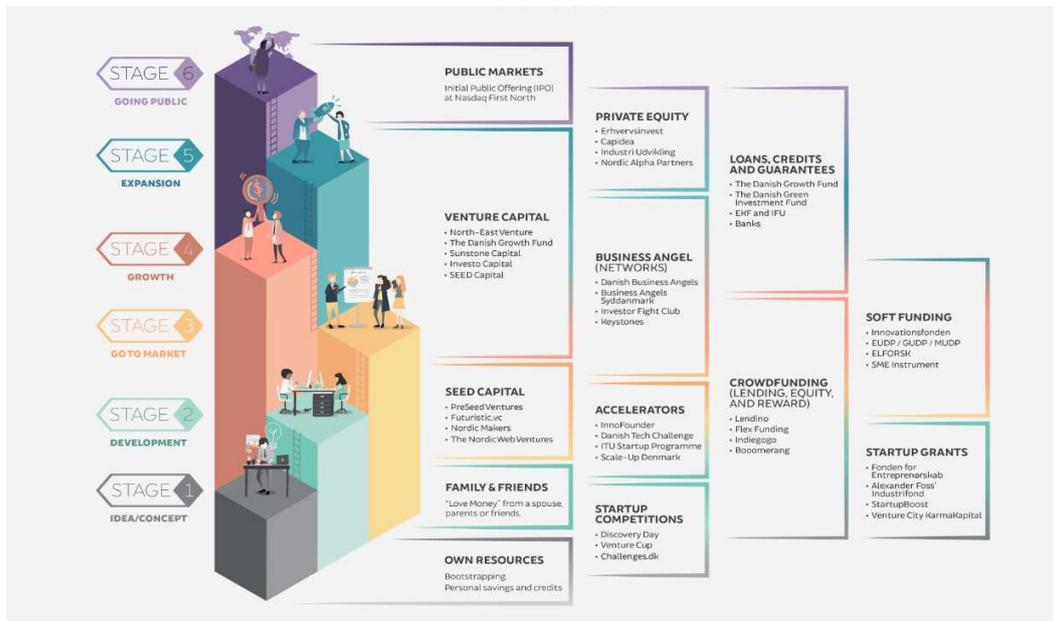
1.3.Funding for startups (Investments)

This point requires further discussion. Startups have the potential to generate significant profits due to their rapid and explosive growth. As a result, they garnered considerable interest from investors seeking to boost their capital.

A startup is typically built on the principle of a product or service invented by its founder. A startup founder frequently oversees product development directly and also serves as the business leader of the organization. Often, he (or she) is more concerned with scaling the business than with profitability. As a result, during the investment stage, the estimated value of a startup does not always correspond to the actual revenue generated during those formative years. As a result, founders and investors think about the value of a startup based on the projected profits, forecasts, trends, and scaling plans that they show during investor meetings.

Unicorns are startups with a market capitalization of \$1 billion or more. This pseudonym has become synonymous with a successful startup. Although there are instances in which seemingly important and attractive startups valued at more than \$1 billion have already completely failed.

When they start a business, some start-ups use their own money (personal or borrowed) to pay for things like rent and food. Others seek funding from angel investors before transitioning to venture capitalists. There are plenty of ways to monetize your startup in general.



The most common sources of funding for startup expansion are as follows:

"Own" - family and friends

Despite the fact that some are not inclined to consider the immediate environment as real investors, in the very early stages of a startup's development, it plays a key role.

The fact is that who, if not the very people, are ready to believe in your initiative at the earliest stages and invest in it. Their small financial injections can play an important role in your start and be a key factor in persuading others to invest their money.

Business angels

A business angel is a person who decides to invest money (their own) in a startup in exchange for a stake in the company. A small investor's job is limited to providing advice and helping to build new relationships and bring in new business because the amount of money spent rarely surpasses €50,000 (\$60,000). Because of this, most angels prefer to invest in ventures that are both financially attractive and relevant to their own areas of interest.

Seed investment

Seed investments are usually relevant in the very early stages of a company's funding cycle. Even before the profit becomes something tangible. The more seed investments a startup manages to accumulate, the more chances it has for success. And the decision to invest in this case is not based on the current profitability of the company, but rather on the potential of the idea and the team that implements it. In practice, seed investments range from \$100,000 to \$1 million.

Venture Capital

Venture capital and a serious search for investors usually become a topic of discussion when a startup has already achieved certain results but is still considered a risky investment.

Unlike business angels, venture capital does not come from individuals, but from specialized investment or venture funds. They invest much larger amounts and not immediately, but in stages. This gives them a guarantee that the startup will not be left without money in the future and will be able to cover its current needs.

Venture capital investments are attracted in several rounds (A, B, C, D, E) until the company becomes profitable or is ready to go on an IPO (place its shares on the stock exchange and become a public company). The amount of investments in each of the rounds is not limited in size, while investments can be attracted from several funds.

1.4. What exactly isn't a startup?

The most effective technique to identify whether a business is a startup is to compare it to other businesses that are not. I've devised a practical way of determining whether or not a company is a non-startup. The following are some ways to tell a startup from a well-known business.

Working business model.

Startups, as you may know, have highly unusual and even infantile business models. Because there is still a low demand for their goods, the business strategy is still being developed. This entails a constant hunt for new ways to create money as well as extra ways to boost income.

Many young businesses have begun their journeys on the basis of ready-made, proven business ideas or through the acquisition of a franchise. These are not start-up businesses.

Stage of product readiness

Most of the time, the product or service that a startup delivers is still in its early stages of development. If a product or service has gone through all of the necessary revisions and fully meets the needs of the target audience, the company is no longer considered a startup.

Furthermore, a large number of new businesses are focusing on the acquisition and distribution of previously existing products on the market. Unless they innovate through other commercial channels, such companies are not considered start-ups.

The number of staff

A startup company is normally as flat as possible, with no big vertical hierarchy and a workforce of a little more than 100 people. However, this characteristic alone does not identify a company as a startup, as there are certain startups that, despite their outstanding size, are still figuring out where they fit in the market.

Business milestone

This is one of the most commonly discussed aspects of a startup. As I said before, a startup is always looking for a business model that can be repeated and scaled.

Thus, even a firm that is 5, 10, or 15 years old can be considered a startup if it is still looking for a means to earn money and is on the border of survival thanks to investor money and funds that believe the creators are going to find a way to make money.

Income

Not everything is straightforward here, either. If a company's annual revenue exceeds \$50 million, it is thought that it is no longer regarded as a startup. However, turnover may not always imply profit. This is entirely doable if a firm places a high priority on expansion and spends a significant amount of money on raising brand awareness, expanding into new regions, and hiring additional top-tier personnel. Many startups have been experiencing this for some time now, such as Amazon and Snapchat, as well as others like Uber and Lyft.

1.5. How to create a startup?

Based on what I've covered in this chapter, we can get a good idea of how a startup starts and what

goes into it. Nevertheless, it is possible to single out the main stages from which the creation and launch of a startup begin.

Creating a startup consists of 5 main stages:

- *Identification of the real problem.* Find a problem that, if corrected, would significantly improve the life of a particular market segment (audience).
- *Market research.* Determine how many people need it and whether there is already a solution to this problem on the market.
- *Creation of an innovative solution.* Find a way to solve the problem with some innovation. It can be using technology or applying new approaches to organize business processes.
- *Creation of a team.* Find like-minded people who believe in your idea and are willing to work with you to bring it to life.
- *Go search.* At this stage, you have to try to sell your product to the target audience, your idea to investors, and look for a business model that will ensure the rapid and long-term growth of your business.

And get ready to run a marathon. After all, as experience shows, it is very unlikely that your idea will suddenly become profitable, and the startup will not encounter difficulties. But all this can be overcome if you keep working hard.

1.6. Conclusion

A startup is a recently founded business that is constantly on the lookout for the optimal business model, focused on growth, and defined by unique dynamics driven by perceived quantity demanded of a good or service.

A startup's objective is to develop rapidly by giving an original solution that fills a specific niche and solves a real problem. There are no precise criteria for what constitutes a startup. However, this phrase is most frequently used in reference to businesses that develop products using innovative technologies. They either provide something fundamentally new or continue to accomplish the same thing but in a different way. Many startups lack standardized business operations, and many lack a steady revenue stream. They are, however, seeking for a sustainable, reproducible company strategy and are committed to growth.

CHAPTER II

Business Methodologies

2.1. Lean Business Methodology

The term lean manufacturing came into play in 1988 as a result of intensive research by American automakers looking for reasons for the remarkable success of Japanese competitors. The roots of the new management style that Japanese cars have brought to the American market can be traced back to Toyota's manufacturing system. It soon became clear that the principle of economic production was universal and worked beautifully not only in industry but also in the service sector, utilities, health care, and government. This is probably the reason why the concept of a modest organization first appeared and then the concept of modest management. If I were to say Lean's main feature in one word, I would say "customer focus". Lean includes an answer on how to achieve this, and there are special tools (methods, practices) for this. Lean's activities (more precisely, his philosophy) are based on "three pillars":

- Establish relationships with customers
- Establish partnerships with suppliers
- Involve their staff (team) in the improvement process.

Without this understanding and clear tools, business leaders' confidence in customer focus will simply remain on paper. Lean is still taking shape as a system of knowledge about how to build a business, although the term itself will soon turn 30 years old. But we can already say with certainty that Lean has elements of philosophy, culture and methodology.

2.1.1. Lean principles

Although the principles of Lean's methodology are very simple, they require a great deal of organizational responsibility. I will briefly talk about them below:

- Determine what creates product value for the end consumer. Many activities and processes in an organization are absolutely irrelevant to the consumer, so they need to be eliminated.
- Identify only the most necessary processes in the production of products, remove unnecessary ones and avoid any waste.
- Ensuring a continuous flow of product creation.
- Do only what the customer needs. The quantity and products he need.
- Reduce unnecessary work, strive for perfection.



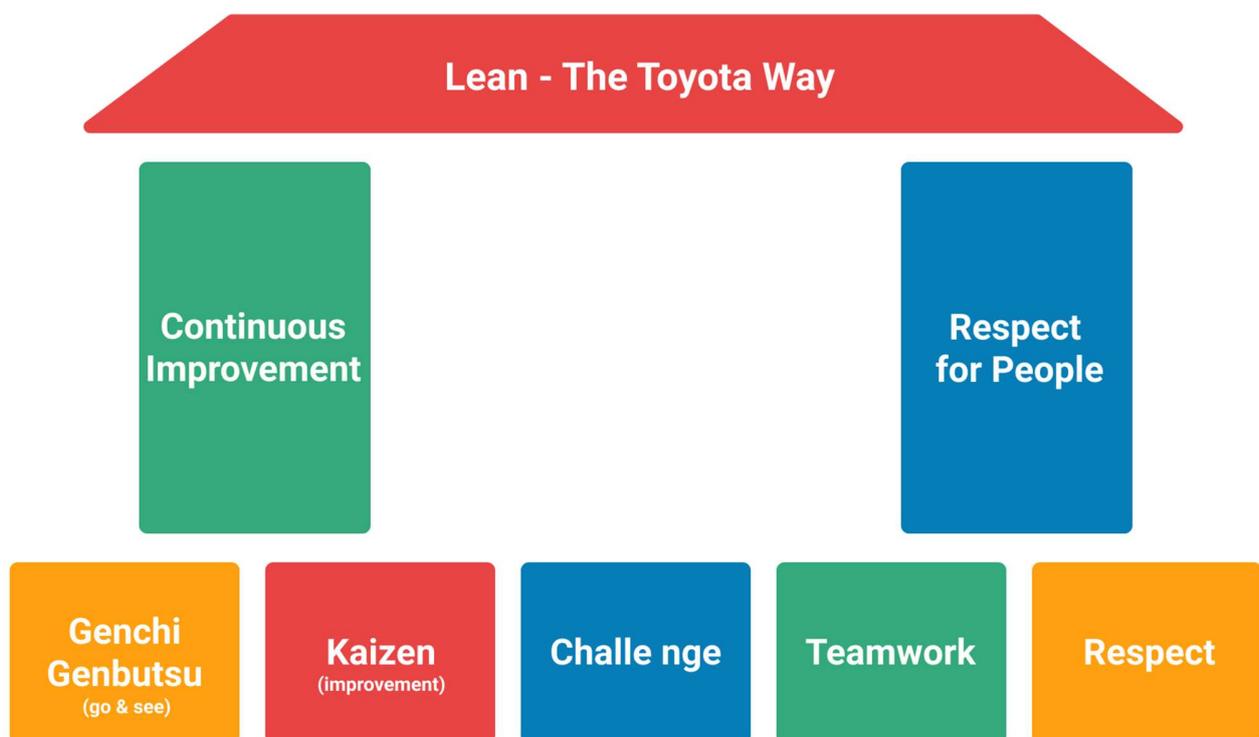
2.1.2. Important tools of Lean methodology.

As mentioned above, the Lean methodology came to the world from the then-young automotive company Toyota. Throughout history, since Taiichi Ohno developed a new method of increasing production efficiency, the corporation has been constantly improving the system, and as a result, a list of tools and methods based on cost-effective system has been developed:

- Kaizen (continuous improvement) - a system in which all participants in the production process can offer tools to improve the final product.
- Material values and necessary information to create a product that meets the wishes and needs of the customer.
- Kanban - a system of organizing the uninterrupted supply of material components with the full depletion of stocks. All the materials needed to produce the products are transported directly to the desired location, bypassing the storage areas. The final product also bypasses the warehouse and is delivered directly to the consumer.
- Forming the most efficient workplace (method 5S) - This system reflects the Japanese love of cleanliness. Because the 5S system describes several parameters: sorting, proper editing, cleaning, standardization, optimization.

- Equipment optimization (SMED method) - developed by expert Shigeo Shingo, the system changes time by several times. At the same time, continuous monitoring of equipment by each participant in the production process allows the most efficient use of equipment to achieve goals.
- Just In Time - Release products at a predetermined time. This means that the engine should deliver the component to the next stage only when needed.
- Andon - Visualization describes how production processes must be performed to achieve maximum efficiency.

These tools are used in various fields of activity: construction, medicine, education, banking, logistics, trade.



2.1.3. Muda, Mura, and Muri

So, within the Lean methodology, they call waste or spending. Anything that has to be removed. Muda, mura, muri are Japanese words that have taken root in English business slang.

Muda is waste, useless waste. consequences of mismanagement.

Mura is unevenness or inconsistency, it's the uneven level of demand for products that are observed within the company from day to day, or from month to month.

Muri - unreasonable overload of personnel (operators), equipment, and other factors of production. Most often, this phenomenon occurs thanks to production processes that aren't properly optimized, which ends up in alternating periods of downtime with periods of too intensive and a stressful mode. Sometimes - even with accidents, failures.



2.1.4. Benefits of Lean Methodology

In the case of the student at the university, it seems that I knew-passed-forgotten. We will take the exam, but after a while I will have nothing left in my head. Nothing comes to mind to put into practice. Similarly, according to the guidelines, cost-effective production cannot be created after implementing several algorithms that reduce costs or the time to complete tasks. Because the methodology needs constant updating. Modernization once a year does not mean the implementation of the methodology in practice.

Therefore, it all depends on experience and practical application. Only in personal experience can new stages of experiments be analyzed and developed by testing theories and gathering data.

2.1.5. What results to expect from the development of Lean?

There are two levels of performance improvement: "macro" and "micro". 1. Macro indicators include those that allow us to assess the effectiveness of the business as a whole: profit, place in the ranking among competitors, market (its geography, volumes), product line, etc. There may also be "particulars": brand recognition (popularity), the level of intellectual property (for example, the number of patents received), the number of receivables, the amount of working capital, output per employee, etc. All these indicators are not universal (not to be confused with frequently used). How, according to what specific criteria, the owner (director) evaluates his business - this is a "subtle matter". They can change - for example, depending on what stage of development the company is at, be local or general. Even top managers may not be fully aware of these nuances. 2. But there are "micro" indicators, they evaluate the efficiency of process activities: labor productivity, the labor intensity of operations, cycle/cycle time, operation/process cost, equipment load, backlog, number of performers, etc. Since Lean is a variant of the process approach to organizing activities in an enterprise, it is clear why the main part of its tools is aimed at improving precisely "micro" indicators (process indicators). Changing these indicators is the basis for improving the "macro" indicators. They can be improved (and this is confirmed by both foreign and domestic experience) at times, 2-5 times. But we must understand that such achievements are not 100% guaranteed to everyone. It all depends on: • The current state of the company • Qualities of mastering Lean-methodology. At the same time, there are no real statistics on the successful and unsuccessful development of Lean. Here, as always, 50/50. Let's talk, for example, about failures. You have reduced the cost of production (maybe even significantly), shortened the production cycle, reduced stocks of equipment in warehouses. Excellent result? But who said that the products will be better sold? On the basis of what was it decided that the improvement of these indicators would lead to a breakthrough in the market? The problem is that the thoughtless, mechanical application of Lean tools does not automatically improve the company's business. This is the peculiarity: it is necessary to use not separate tools, but the Lean methodology, the starting point of which is the consumer, the client. Before you improve something, you need to figure out what exactly needs to be changed from the point of view of the consumer, what is superfluous that does not add value to the final product. And after that, start building a process in a certain way - without this extra.

2.2. Lean Startup Methodology

2.2.1. The concept of Lean Startup

The Lean Startup method was first formulated by Eric Rees in 2011, which he described in his book *Business from Scratch*. The Lean Startup approach is about constantly testing the product, iteratively releasing it, making adjustments based on customer feedback, and avoiding detailed planning and significant investments. The method allows you to understand the value of the proposal for the client already at the start and spend only really necessary funds on the implementation of the idea. At the same time, a thrifty attitude extends not only to money but also to other resources of the company - employees, time.

In other words, a startup will not be helped by business planning, strategy, or the charisma of the founders of the product that it develops turns out to be of no use to anyone. Lean Startup is based on constant experiments with the minimum viable product (MVP) and includes tools such as Customer Development, Lean Canvas (9-step business model), agile (quick response to customer feedback).

2.2.2. Efficiency of the Lean Startup method

A startup needs to be sure that the product will be in demand. The Lean Startup method reduces risks and increases the likelihood of a valuable product for the consumer entering the market without an impressive amount of funding, time, and personnel.

The goal of the approach is to conserve resources until a scalable model is found. At the start, uncertainty clouds the prospects and understanding of what the client needs. Lean Startup indicates that it is important for developers not only to be able to anticipate the needs of the target audience but also to organize the receipt of empirical data-the ability to test hypotheses in practice.

As a way of performing the "lean" strategy, the company carefully analyzes its client's needs, creates an MVP, and tests it to see how well it meets the target audience (and whether it is needed at all). It's vital to remember that the lean method isn't a panacea and won't guarantee a startup's success. Rather, the strategy will assist you in recognizing that the project you started is a dead-end, allowing you to avoid living in denial and wasting resources.

The main principles of Lean Startup are:

1. The Lean Startup approach is applicable to any company in any industry if it operates in a high-risk environment (including a large organization when introducing a new product to the market).
2. Application of management suitable for high-risk conditions.
3. Continuous development and factual confirmation - a startup needs constant training in the needs of the target audience with empirical testing of hypotheses.
4. The main objective of the method is an early assessment of the reaction of consumers to the MVP, its weaknesses, which will make it possible to decide whether to follow the chosen course or make a pivot.
5. Accounting for innovations - analysis of a system of criteria and metrics to determine the effectiveness of the current activities of a startup.

The Lean Startup method includes several steps:

Generalization of hypotheses in the form of a canvas of a business model, consisting of 9 blocks and describing the key processes in a startup. Conventionally, they can be combined into 4 groups - supply, infrastructure, consumers, finance. That is, instead of a detailed traditional business plan, the company describes the main processes in the form of a business model canvas that clearly demonstrates how a startup creates value for itself and its target audience.

Hypothesis testing, implementation of the customer development tool - studying the reaction of the target audience to the company's offer, surveying potential customers, partners about the main aspects of the activity (product functions, degree of satisfaction of needs, pricing, ways to attract customers, and so on).

Agile development (agile) - includes the process of creating an MVP, testing it, receiving feedback from the user, making adjustments. Iterations allow you to get a product that is most valuable to the consumer.

The Lean Startup approach calls for starting the creation of an MVP as early as possible with minimal investment (money, time, effort). A raw product may not have significant functionality and should not be perfect - the main thing is that you can evaluate its success or failure in practice. The MVP is made of high quality so that it can attract the first customers.

Constant innovation based on product testing, surveys, and user behavior analysis is the essence of the "lean approach" - the basic offer may fail, but this is a reason not to give up, but to think about effective changes, create and test new hypotheses.

During the implementation of Lean Startup, the company should aim not for the short-term effect of the actions taken, but for long-term results that provide the startup with rapid and sustainable growth. Eric Rees emphasizes that new customers come from the actions of earlier customers.

2.2.3. To get into practice

While the trial, a startup may obtain qualitative feedback, such as which product alternatives they like and which they dislike, or quantitative input, such as the number of consumers utilizing the product and the number of registered users.

Understanding what factors contribute to a startup's ability to build a viable company is more essential than incentives and media attention. The chain of concepts "create-value-learn" lies at the core of the lean startup concept. The primary objective and core of startup management are to shorten the feedback loop. Each component of this cycle is fascinating in its own right.

Build

A startup should begin developing a minimal viable product (MVP) as soon as feasible. A minimum viable product (MVP) is a version of a product that enables you to begin the build-measure-learn cycle with the least amount of work and development time.

This primitive product may be barren of the alternatives that purchasers value most in the future, but it should have enough information to enable non-specialists to judge its success or failure - which should be obvious in the first place. More exactly, people will be required to operate it with little knowledge.

Measure

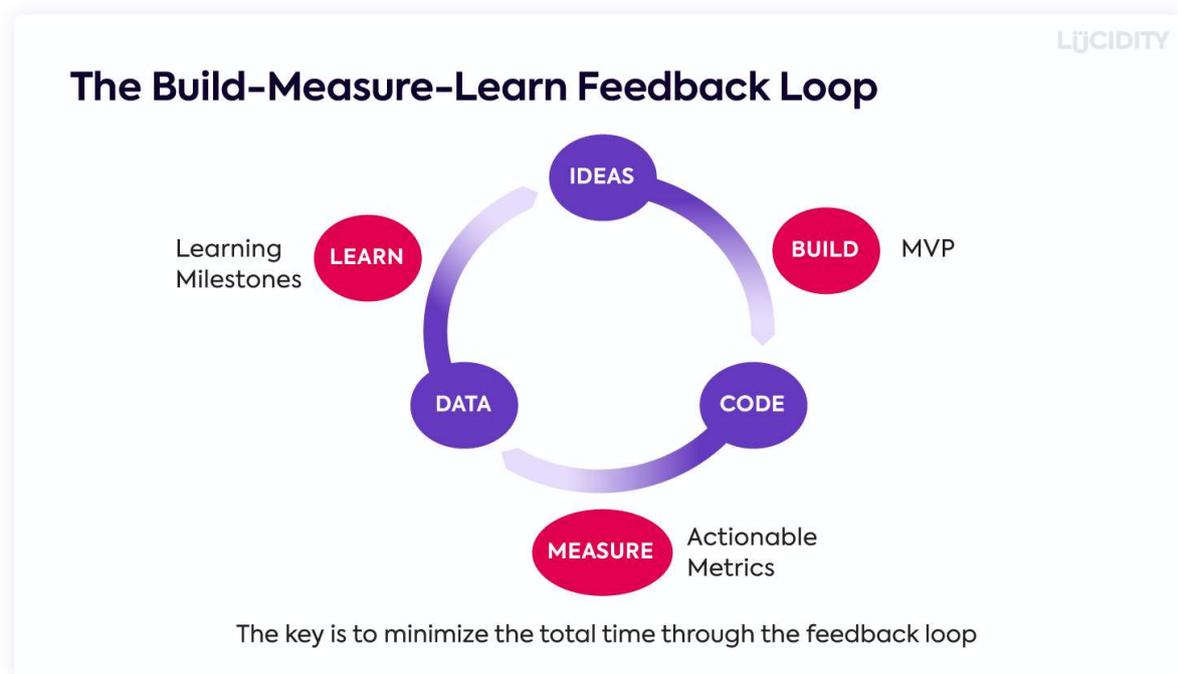
This entails analyzing if the efforts used in developing a product will yield the expected outcomes. And although this is the primary distinction between analyzing a startup firm and traditional techniques when it comes to achieving deadlines and setting a budget, it's easy to overlook the fact that a startup built something that no one needs. In a lean startup, the primary technique of valuing is to consider innovation.

"This is a quantifiable method for measuring the effectiveness of our efforts to jump-start the engine of growth. Additionally, it enables you to achieve intermediate learning results."

Learn

This requires determining whether to continue on the current course or take a major detour - a complete rethinking of the company strategy. An entrepreneur must constantly be adaptable; if he determines that

the route selected will not result in success, he must develop a new strategic assumption and cease spending money on a pointless endeavor.



2.2.4. Cons of Lean Startup

I think it is great to express constructive critique on any subject. There is nothing to take for granted. We can only move forwards by questioning, discussing, and constructive criticism that leads to new discoveries. So, I want to comment on a few shortcomings of the Lean Startup methodology

- Products that are created to solve a single problem and are quickly released to the market are crude and cannot win much love from users. This is probably why large companies, after buying such startups, almost immediately stop their autonomous work.
- Companies that focus on the MVP concept tend to save on project architecture. If you don't have time to build the entire product, you definitely won't bother with its architecture. Unfortunately, the success or failure of the company depends on the elaboration of the project architecture.
- The MVP concept should be taken with a grain of salt. Yes, in the early stages of a company's life, when there is a catastrophic lack of money, and you need to enter the market as soon as possible, it is quite suitable. We must move in stages, in iterations, but not at such a fast pace as

to tire out our team. I believe that it is necessary to build a long-term business and not just another service for sale to the first person you meet.

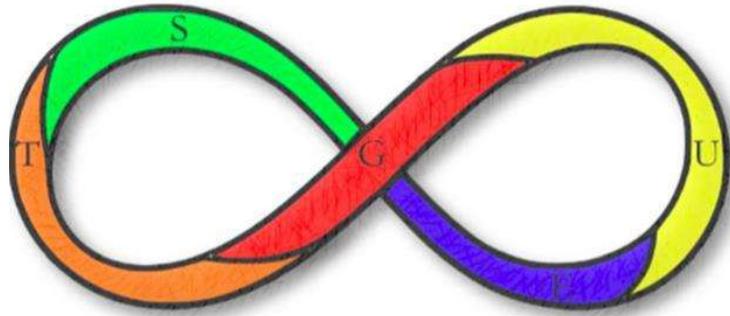
- There are no exact rules to follow. They are created and solved by the team. However, there are many guides, tools, and inspirations shared by other Lean Startup practitioners.

Also, how do you know if it's a "good idea" if you don't test it? In addition, entrepreneurs should never stop testing, even when scaling. You are simply entering a different phase of your company where your metrics will change as well as what you are testing. If you're making turns all the time, you're just not approaching a lean startup the right way. In today's fast-paced world, the classic five-year strategy is dead!

The main point of a strategy is deciding not to do anything wrong. The beautiful thing about a lean startup is that if you implement it in a systematic and best-practices manner, it will assist you in determining what your strategy should be.

CHAPTER III

GUEST Methodology



The GUEST methodology was established by researchers at the “Politecnico di Torino” based on an investigation of Italian start-ups and SMEs with the goal of guiding various actors participating in the decision-making process and evaluating their outcomes, minimizing the time required for implementation.

3.1. Definition of GUEST

The GUEST approach establishes an original framework for business management; it enables control of the process from conception to implementation of a new idea. Additionally, the GUEST technique, as a conceptual and practical instrument, enables different stakeholders to convey their vision, challenges, and opportunities using the same structure. This enables businesses to improve their efficiency and quality.

GUEST is an abbreviation of five words that represent the method's steps: Go, Uniform, Evaluate, Solve, and Test.

Regardless of whether the approach standardizes the tools used to construct a new business or launch a start-up, an overall process monitoring tool is important. GUEST is inspired by the Kanban approach of Lean Production as described in Chapter 2.

3.1.1. The Kanban system

The original Kanban technique handles the flow of information, particularly within businesses, by utilizing unique instruction cards associated with various activities. This allows for more efficient production planning and waste reduction. Kanban was adapted for process control.

The cards are replaced in the Process Kanban by standardized post-it notes in various colors (red, yellow, blue, green, and orange) that match the GUEST stages that divide the process into five phases. The first phase, "Backlog queue," contains overdue actions that must progress to the second stage, "To do," where activities are prioritized. The third phase is "WIP," which shows ongoing operations, whereas the "Done" phase denotes completed actions that must be approved by the Project Manager. Finally, the last phase, "Sent," shows actions that have been approved by the client and can be sent to them. The post contains information on the activity, the start and end dates, and the resource responsible for the activity. Using the Kanban process, activities can be managed separately, allowing for the oversight of a single project or an entire business at all times in a standardized manner, as well as the detection of major internal problems that may affect many projects. Additionally, each team member has the ability to provide suggestions, and the project manager can keep track of the company's development.

The Project Kanban, in addition to the Process Kanban, is required.

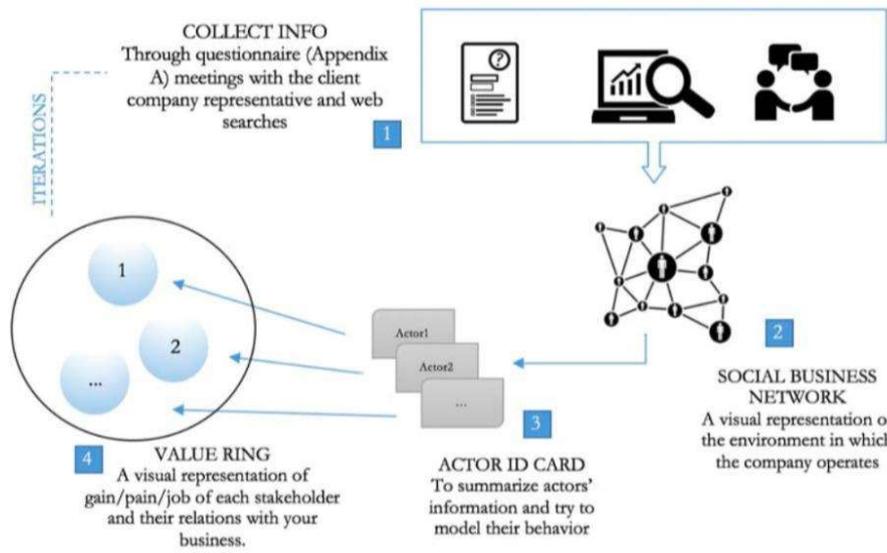
The Project Kanban is necessary for every single project and has a greater degree of detail, even though the basic structure is comparable to the Process Kanban mentioned above. Indeed, throughout the GUEST approach, tasks and sub-tasks are documented. This way, a project can be monitored and shared with a client to ensure his satisfaction.

The goal of these two tools is to give an overall picture of the business and each project that is being watched:

- The average amount of time it takes to acquire a client
- The average duration of an operating activity's startup phase
- The average duration of project management
- Monitoring the activities of each resource that contributes to a project's success
- Monitoring and analyzing the performance of each team member
- The ability to compare the progress of projects with comparable scopes or features.

3.2. Go

The Go phase is the first of the GUEST methodology's phases, and its objective is to establish contact with the company in order to get important information for evaluating the project's potential. As shown in the figure below, the Go phase process consists of four parts.



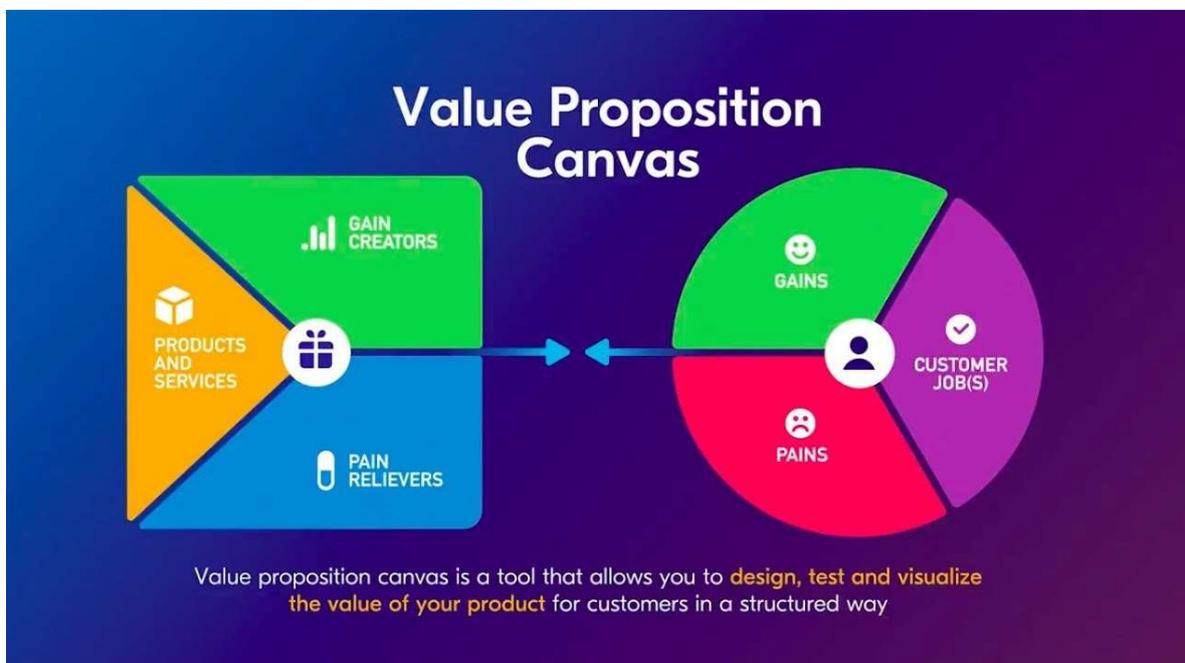
The first phase is to find out information through meetings and a questionnaire, which is divided into seven paragraphs: general information, activities, commercial information, customers, suppliers, and competitors, as well as a company appraisal.

Then, a Social Business Network (SBN) document is developed to visually portray the business and its environment, highlighting the interactions between all aspects and the relationships between the system's various participants, both good and negative. Each type of actor is treated as an interdependent unit in the standardized SBN chart and is represented by a distinct node; each node is connected by one or more arches that vary according to the type of relationship. Arches can be unidirectional or bidirectional and serve as conduits for resource transfer or flow. This way, the overall picture of a company entity and how it runs may be considered, rather than just the direct link. This stage is excellent for assessing and planning operational activities. The next two processes are critical for identifying the actors and stakeholders in a firm.

3.2.1. Actor ID Card and Value Ring

The Actor ID Card is a tool that assists in defining the various actors in a business in such a way that their needs can be identified and a product created to meet them. To accomplish this, it is necessary to have a thorough understanding of the actors and to develop a strategy around them.

This instrument is encouraged by the Canvas model, more specifically by the Value Proposition, which defines the customer, his or her profile, and needs in order to determine the best value proposition. While the Value Proposition of the Canvas is customer-centric, the Actor ID is actor-centric and is comprised of several sections. The Actor Profile is defined as the type of actor and its description, whereas the Actor Situation is defined as the actor's current situation and is composed of three distinct parts.



Customer Job: This section discusses the various types of actor occupations.

- Functional jobs
- Social jobs
- Personal jobs

Gains: refers to the desired outcomes or rewards that actor's seek.

- Required gains
- Expected gains
- Potential gains
- Unexpected gains

Pains: refers to the unfavorable parts of the actor's employment.

- Unintended consequences (issues)
- Barriers
- Risks

Pain relievers: refers to the way in which items or services alleviate the primary actor's pain.

Gain creators: describes how items or services generate significant actor gains.

Products and services: identifies and prioritizes products and services that meet the actor's needs.

- Tangible
- Intangible
- Digital
- Financial

The GO phase concludes with the construction of the Value Ring, a visual depiction that begins with the information on the Actor ID card and highlights two new variables: stakeholder influence and priorities. The angular area is used to represent the first, while the radius is used to represent the second. Each actor's job, gain, and pain are assigned a time priority based on today, tomorrow, and the following future.

This way, it is possible to gain a better understanding of the primary elements influencing the relationships between businesses and players while also prioritizing the market knowledge gathered through earlier methods. The objective is to have a thorough understanding of customers and their demands in order to design a product or business that is optimal for them.

3.3. Uniform phase

The Uniform phase is the second step of the GUEST technique, and its objective is to standardize the data gathered in the Go phase in order to gain a better understanding of the business model and governance type.

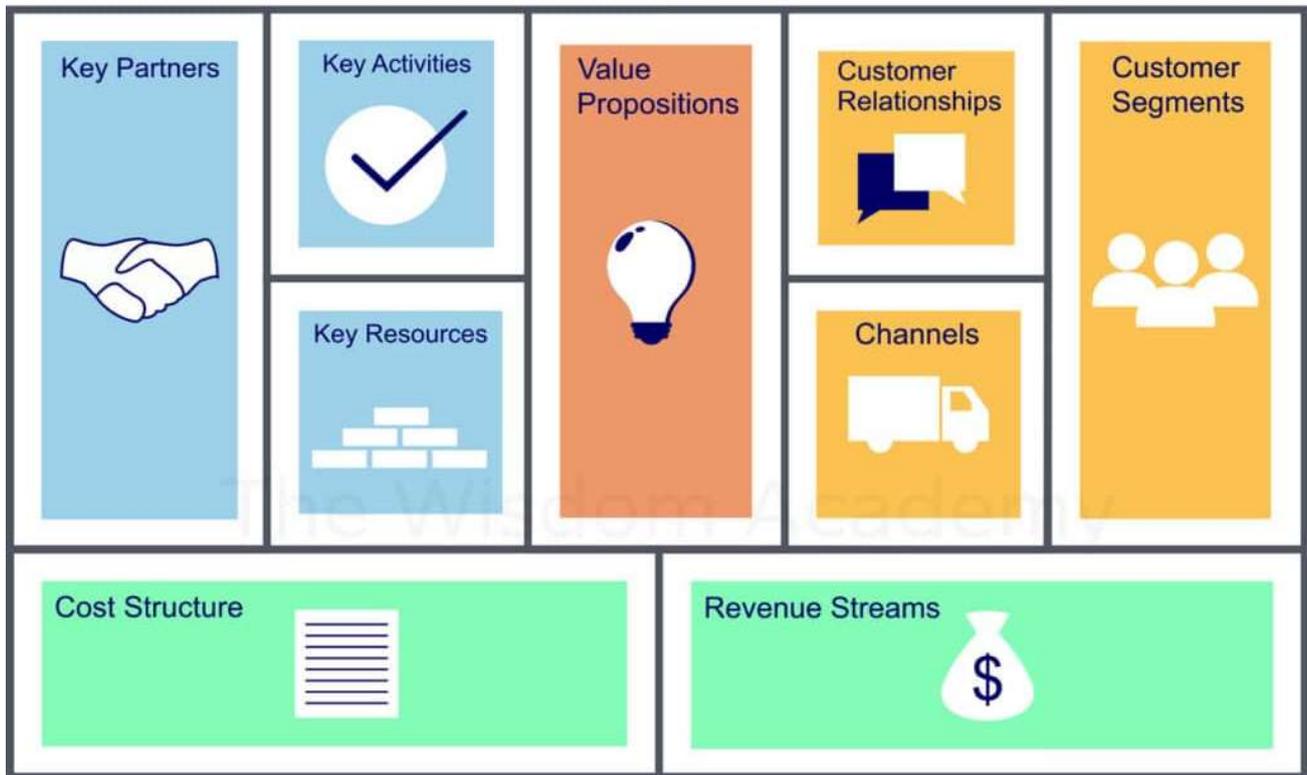
The Business Model Canvas is the tool used in the Uniform phase.

This instrument is beneficial throughout the planning phase of a business's development, but it is also applicable to the development of new business concepts, the production of innovation through inventive start-ups, and the relocation of existing businesses. This step will refine the canvas by incorporating all of the acquired data.

The Business Model Canvas is composed of nine components:

- Customer segments: describe the groups of people or organizations that the company wishes to contact and serve, based on their common needs.
- Value proposition: represents products and services that address a client's problem and add value to a certain consumer group by meeting their demands.

- **Channels:** serve as a means of communication between a company and its customer groups, to provide a positive customer experience. Direct or indirect channels are possible. The former may entail higher costs but better margins, whereas the latter enables an organization to use the strengths of its partners while maintaining lower profit margins.
- **Customer relationships:** this block shows the company's relationships with each customer. It is critical to understand the type of relationship that is appropriate for each customer and business model. It details the methods by which the company acquires, retains, and increases its customer base.
- **Revenue streams:** depict the revenue flows of the company in terms of pricing and payment mechanisms (sale, usage fee, licenses, etc.). Indeed, the revenue streams' composition enables a sustainable business model.
- **Strategic assets:** This section contains the strategic assets needed to implement the business strategy and generate value for a specific segment. Physical, intellectual, human, and financial assets are all included.
- **Critical activities:** these are the most important activities and processes that contribute to gaining a competitive advantage. Indeed, the firm must manage them to maintain its business model. Key activities might be productive, such as in a manufacturing organization, or problem-solving, such as in the service industry, or platform and network maintenance and development.
- **Key partners:** they represent external partners and suppliers who are critical to the business plan's implementation and market success. Strategic alliances and joint ventures enable the organization to address a variety of customer needs more effectively. Along with economies of scale, these forms of interactions can result in the acquisition and optimization of resources.
- **Cost structure:** this is the final decision that must be made. The structural cost that the business must bear is influenced by critical resources, critical activities, and critical partners. Cost-cutting is not always easy for certain operations. In any case, in addition to economies of scale and scope, the business model may include both fixed and variable expenses. Additionally, it is possible to identify a business model that is cost-driven, focused on cost minimization, or a business model that is value-driven, emphasizing service personalization.



The Business Model Canvas's nine building pieces can be classified into four broad categories: product, customer, infrastructure, and finance. The first section is devoted to the value proposition, or the items and services offered by a business to the market. A customer area is defined by customer groups, channels, and relationships with customers and is associated with customer interaction. The infrastructure management sector is comprised of critical resources and critical partnerships; it refers to the primary functions of logistics and production in terms of relationships. Finally, the financial area is defined by the cost structure and revenue streams, which reflect the company's sustainability.

The Business Model Canvas model must be read from the center, where the value proposition is located. Then there is the right side, which contains all of the features necessary for the business to function, and finally, the left side, which contains all of the instruments necessary for reaching the objectives.

3.4. Evaluate Phase

The Evaluate phase is the third in the GUEST technique. Its objective is to begin troubleshooting and developing prospects by examining prior outcomes and outlining the cost and revenue structure, as well as identifying difficulties and opportunities. Plans of action are developed.

Three operational tools are used in this phase:

The first is the SWOT analysis, a strategic planning technique that enables consideration of the desired outcome while taking both internal and external elements into account, and so aids in decision-making. The study produces a summary diagram that depicts the system's strengths and weaknesses (endogenous elements), as well as the opportunities and dangers (exogenous factors).

The Balanced Scorecard is the second tool used in the Evaluate phase; it is a comprehensive strategic planning and management system model that is used to assess and evaluate an organization's performance. It begins with the strategy and concludes with verification. The four views contrasted are the following: economic and financial, customer, internal process, and learning and growth. Clearly, vision and the strategic intent to follow the business objective are critical components of this strategy.

The third tool in this GUEST's phase is the ICE diagram, which stands for Identity-Control-Evaluate. This is a document that is contingent upon the completion of the SWOT analysis and is comprised of three columns. The first, titled Identify, refers to the company's identification of possibilities or challenges. The second column, Control, is used to identify the activities or solutions necessary to capitalize on opportunities or resolve difficulties. Finally, the Evaluate column performs an analysis and monitoring of the solution by setting key performance indicators, or KPIs. The ICE diagram's purpose is to convert problems and opportunities into concrete actions that can be implemented and monitored regularly. This tool takes both financial and non-financial elements into account. The Balanced Scorecard's viewpoints are considered while defining opportunities and issues.

3.5. Solve and Test phase

3.5.1. The Solve phase

The Solve phase is the fourth of the GUEST methodology, and its objective is to thoroughly investigate the solutions to previously discovered problems and to recommend alternative operational models.

In this phase, two types of materials may be used Executive ICE-Diagrams and Solution Canvases.

The first, the Executive ICE-Diagram, describes the operational plan in terms of both economic resources and the time required to achieve it. This paper summarizes the cash flow generated by the business's operations.

Consider the Solution Canvas in comparison to the Business Model Canvas. While the Business Model Canvas used in the Uniform phase portrays the firm 'as is,' the Solution Canvas focuses on the solutions that have been examined and produced as a result of the previous step's execution beginning with the Business Model Canvas. Even the Solution Canvas is separated into nine distinct sections:

- Decision makers,
- Constraints,
- Decisions,
- Information/resources,
- Users,
- Channels,
- Goals,
- Costs.

3.5.2. The Test phase

The Test phase is the final step in the GUEST methodology.

It includes a summary of the action plans implemented, as well as evaluations of the results. In the pursuit of continuous improvement, the Test phase can serve as a jumping-off point for reapplying the GUEST approach.

CHAPTER IV

4.1. Case Study: Amazon Green Community

Executive Summary

The socio-cultural context in which Amazon operates shows an increasing interest in the preservation of the environment. Considering Amazon’s “customer-obsession”, Amazon Green Community is aimed to reduce the last-mile delivery’s CO2 emissions focusing on people. Through the introduction of a gamification process the customers will be motivated to take some “green decision” to reduce their deliveries’ emissions directly in order to receive rewards and promotions.

Project Definition

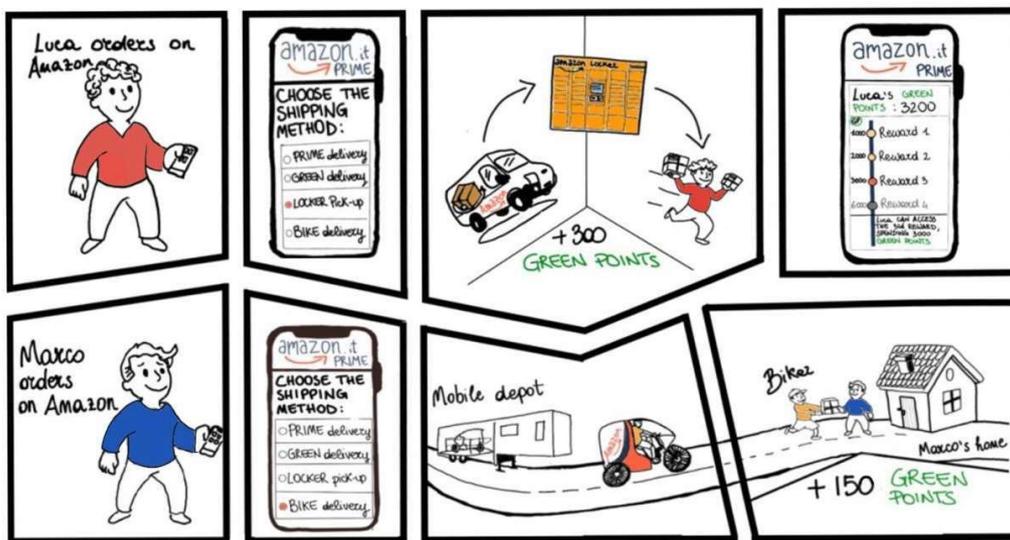


Figure 1.1 Introducing Amazon Green Community, Luca has chosen an Amazon Locker Pick-up, Marco a Bike Delivery, both are reducing CO₂ emissions.

Amazon Green Community consists of the usage of a gamification process in order to encourage the Amazon Prime user to make changes on the shipping methods of the purchased products, drawing the customer at the head of the process of CO₂ emissions reduction during the last mile delivery, and offering cumulative points in exchange. A balance of points (named Green Points) will be associated with each user. The balance could be used within the Amazon platforms to redeem prizes such as Amazon Gift Cards, Amazon services free trials, discounts on products and exclusive opportunities. The initial balance is set to zero.

Delivery Methods	Impact on Emission
Pick up from a Locker: Pickup/return of a product to an Amazon Locker.	Reduction of the on-road distance traveled by trucks to deliver the product.
Bike delivery: Delivery with a cargo-bike (deployment of a mobile depot as a hub for the delivery).	Replacing the traditional truck delivery with a mobile depot as a hub for electric cargo-bikes, it is possible to dramatically reduce the distance traveled by polluting vehicles.
Green delivery: Postponing of the date of delivery of the product (if applicable)	In certain cases, by postponing the delivery date, it is possible to enhance the filling levels of trucks, reducing the number of operating vehicles or avoiding the air freight transportation, which is the most polluting method of shipment.

Table 1.1 Amazon Green Community Delivery Methods, how these reduce the delivery CO₂ emissions

Locker Pick Up, Bike Delivery, and the traditional Prime Delivery will be available to be selected by the user, choosing the first, or the second one, the user will earn green points. If Green Delivery is applicable to the order in placement, a pop-up window will appear and will propose to the user to postpone the delivery date of his order, by 1 to 4 days, in exchange for Green Points.

Introducing Gamification

Amazon Green Community revolves around the concept of “gamification” and its introduction into Amazon Platforms.

Gamification can be defined as a strategy based on the application of game design elements (such as achievements, rewards, tutorials, consequences of decisions, social status and networking) into different contexts, it has been adopted by several companies in the last years because of its effectiveness and innovativeness.

The main purpose consists in the development of a strong community between the users, they will be involved in the gamification process and this will generate a trend of “green decisions” from the users.

In the text: Learning and gamification: a possible relationship? by L.Caporello, M. Magni, F. Pennarola (2017), the authors analyze a scenario in which gamification has been applied to a learning context, the results had been analyzed on a three base model, we will consider the effectiveness in attitude change:

Sample of 21 studies	POSITIVE	NEGATIVE	NEUTRAL
CHANGE IN ATTITUDE	71.43%	0%	28.57%

Table 1.2 Attitudinal responses on 21 different application of gamification

Definition of the Test Location

In order to analyze the strategy proposed, in a real context, we identified Turin (Piedmont, Italy) as the best candidate for the introduction of Amazon Green Community for several reasons.

First, we evaluated the presence of Amazon in the area. With two Development Centers, two Distribution Centers, and a Sorting Center, Amazon has a strong presence in Piedmont.

We also took into consideration the feasibility: Turin’s city center is limited to a relatively small area, this means that the test phase can be developed and managed more easily there than a city center spreading in a wider area.

Another reason involved in our decision is the attitude of the City, in the last years Turin identified itself as an innovative area, this is reflected on several events occurred in the last years, for example:

In 2016 it has been awarded as the second most innovative city by European Commission. I3P, the Polytechnic of Turin’s startup incubator has been appointed as the world’ best public incubator by World Ranking of Business Incubator and Accelerators 2019-2020.

All those, mixed with a few minor elements, led us to this decision.

Mission

The awareness about external environment conditions increased in a fast way during the last years. The mission of our strategy is to reduce the CO₂ emissions involving users in the decision-making process.

This strategy is very well aligned to the Amazon customer obsession, it tries to answer a widespread need of people in 2019.

Amazon is a leader-company in the logistic industry, they revolutionized the concept of e-commerce and logistics. The strategy wants to increase the customer’s decisional power on their products deliveries, involving them through the usage of the gamification. Amazon Green Community could also increase the value of company image, considering its primary scope is to reduce the impact of Amazon logistics on the environment, without affecting the service level.

Key Resources

For the implementation of our strategy, several key resources have been identified:

Amazon Locker: Considering their location, capacity, and amount, Lockers can be considered as a key resource for the strategy.

In order to make this tool effective, are required a great distribution in the area analyzed and enough capacity for the demand.

Specifically, we have seen that the Lockers in the Turin area considered are enough and well-positioned in order to encourage their usage by the customers.

Mobile depot: This is one of the highest expressions of the search for a sustainable logistics solution in urban areas. It consists of a truck trailer that loaded with packages already divided by electric cargo bikes. Those bikes will be used for the last segment of the deliveries, replacing the trucks.

Amazon Logistics: This service allows to reach a wide number of customers in the shortest time possible. It is a key resource for the implementation of our strategy for the development, and management, of the transport and delivery networks.

Amazon Platforms: regarding this point it is obviously essential to implement, the already existing, Amazon platforms, integrating our new shipping modalities and creating the gamification system.

Marketing: In order to understand our customers’ trends, we have shared a digital survey around Turin. From the data obtained, we realized that investing in marketing and advertising is essential for our strategy to involve enough users. Mainly it should advertise what Amazon Lockers are and where they are located (in the survey, after explaining this service to the user, the percentage of usage increases drastically, around the 65-80% increase, depending on the age group). Therefore, the main goals of marketing must therefore be to make the customer feel an integral part of the entire process and make him understand that he can personally reduce emissions, choosing from various ecological actions, and then, earn rewards.

Our survey shows that the implementation of Amazon Green Community represents a strong incentive for customers to sign up for Prime, while the rewards encourage them to choose one of the ecological shipping methods.

Cost Analysis

In Table 2.1 we analyzed the structural costs for the development and the implementation of Amazon Green Community in its test stage.

Total Structural Costs (Year 1)	€388,000 – €405,000
Total Structural Costs (Year 1 to 3)	€864,000 – €915,000

Table 2.1 Structural Costs, Extract from Annex 1

The operative costs will incur in several changes with the introduction of Amazon Green Community, the totality of the operative costs is strictly related to the strategy implementation level, in this analysis we will consider a kilometric reference.

Considering the assumptions in Annex 4.

	DIESEL VEHICLE	FUEL VEHICLE
CURRENT COSTS (25.000 KM)	€ 67,000	€ 67,500
COST SAVINGS INTRODUCING DELIVERIES WITH CARGO-BIKES %	15,49%	15,55%

Table 2.2 Kilometric Cost Savings before and after cargo-bikes deliveries introduction, Extraction from Annex 2.

Breakeven points

Amazon Green Community do not expect to generate new direct revenues, but to reduce operative costs. The financial impact of the strategy is directly related to its implementation level. The table below shows the total shipping distance that Amazon Green Community should involve in order to meet the annual maintenance costs with the operative savings.

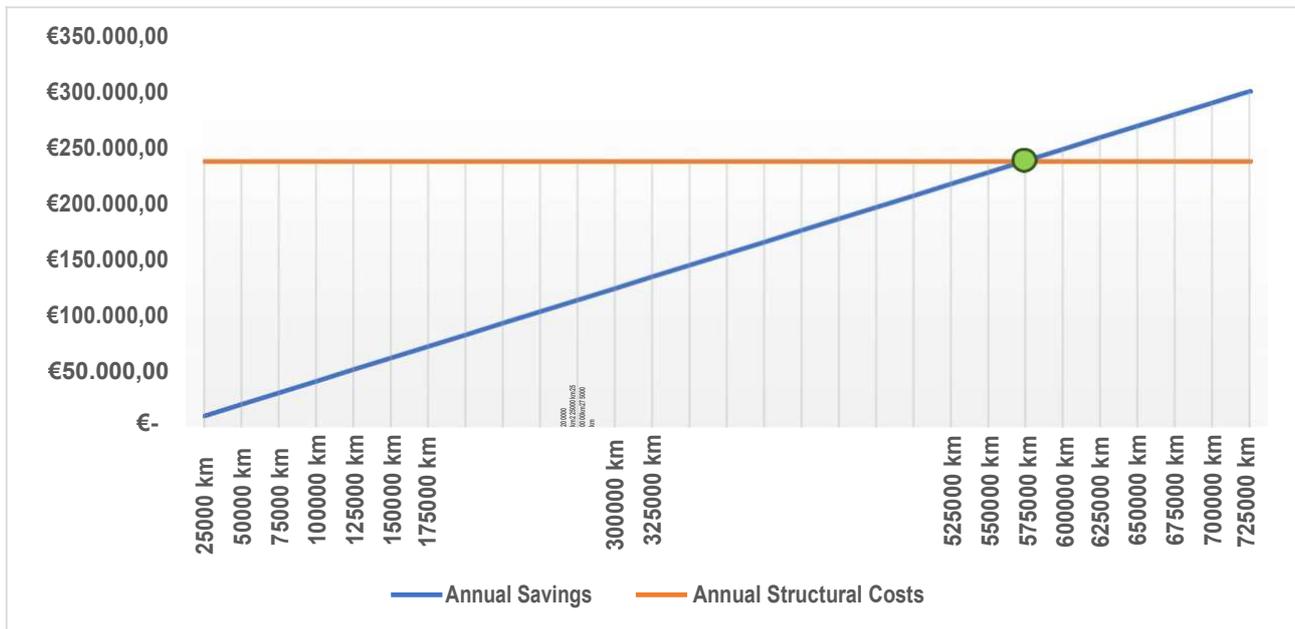


Table 2.3 Breakeven point between Annual Savings and Annual Structural Costs

Taking into account the initial investment made in year one, it should be considered the level of kilometric implementation in order to find the time required to return on the investment. As shown in Annex 5, in a 200.000Km scenario the B/E point is obtained at year 4.7; in a 625.000Km scenario it would be 1.5 years.

Scalability Expenses

From the Test Stage, usage trends of the new shipping methods will be gathered. A capital deployment on investments might be necessary for new Amazon Lockers and additional facilities depending on their usage and on the capacity levels to reach.

CO₂ Emissions Reduction

As shown before, there are three main ways by which we reduce Amazon's last mile deliveries CO₂ emissions, those are:

- Cargo-Bikes Deliveries;
- Locker Pick Up;
- Green Delivery.

Considering the assumptions in Annex 4.

	DIESEL VEHICLE	FUEL VEHICLE
CURRENT EMISSIONS (25.000KM)	307,000 [tons]	419,000 [tons]
EMISSIONS REDUCTION INTRODUCING DELIVERIES WITH CARGO-BIKES %	25%	48,86%

Table 3.1 kilometric CO₂ emissions before and after cargo-bikes deliveries introduction, Extraction from Annex 3.

About the Amazon Lockers, their usage will decrease the amount of road traveled by the courier for each delivery, this follows the same emissions reduction principles of the Cargo-Bikes Deliveries.

The Green Delivery modality can be selected when the CO₂ emissions, related to the shipping modalities of the order, can be reduced postdating the delivery date from 1 to 4 days, in some scenarios it is possible to reduce the related CO₂ emissions up to 84%.

Referring to How Amazon Can Deliver on Its Promise to Reduce Emissions, by Wendy Tate, International Business Times (2019), we obtained that:

	TRANSPORTATION MODE	CO ₂ EMISSIONS
next-day delivery	Air + Van	50 [lbs.]
two-days delivery	Truck + Van (from the nearest location)	10 [lbs.]
four-days delivery	Truck (to consolidation center to truck to van)	8 [lbs.]

Table 3.2 emissions related to the transportation mode, referring to 3 different time constraints.

Efficiency

In order to estimate the efficiency of our strategy, we referred to 2 documents. The assumption related to the first doc (A Managerial Analysis of Urban Parcel Delivery: A Lean Business Approach, by Luce Brotcorne, Guido Perboli, Mariangela Rosano, Qu Wei (2019)) research are reported on Annex 4.

In this document, the parcels are divided into mailers (0-3kg), small parcels (3-5kg), and large parcels (more than 6kg), and thanks to this, we have been able to define the potential impact of our strategy on the operations' efficiency.

In the scenario in which bikers deliver only mailers, the efficiency of traditional distribution channels decreases by 15%. Instead, when they deliver mailers and small parcels, efficiency has a 30% drop.

For these reasons, the strategy test stage will be developed in the city center of Turin, the final stage will provide the bike delivery also in the semi-central area. In both stages, the bikers, in order to reduce the vans efficiency reduction will deliver only mailers (about 58% of parcels).

From the second document* (Simulation-optimization framework for City Logistics: an application on multimodal last-mile delivery, by Guido Perboli, Mariangela Rosano, Michael Saint-Guillain, Pietro Rizzo (2017)) we extrapolated the following results.

The usage of bikes (parcels up to 5kg) reduces the van usage (-32%), the operating costs (-37%) and CO₂ emissions (-40%).

The usage of vans, Lockers, and bikers all at the same time, leads to the minimum loss of efficiency (-12%) when there is both high demand and high dynamism.

*This is a scenario in which bikers don't deliver only mailers (parcels up to 3kg).

Stakeholders

The relationship between Amazon and some stakeholders' categories could change due to the application of the Amazon Green Community strategy.

This strategy increases the company's value proposition, thanks to the involvement of the final users in the decision-making process. Users will have the possibility to reduce the CO₂ emissions of their parcel deliveries.

The traditional distribution channels (vans) will have a fall in efficiency (about -15%) due to the usage of bikers in the mailers' shipment (up to 3kg) parcels. This could also lead to a minor usage of vans due to the strategy.

In order to reach the best result, as seen before in efficiency analysis, it is good to reach a good level of dynamism. For this reason, vans are very important for the implementation: they will support bikers and Lockers in order to better managing the deliveries (first in the city center and then in semi-center too), minimizing the loss of efficiency.

It is necessary to introduce new distribution channels, which will have the responsibility to deliver mailers parcels. In this group bikers and mobile depot driver/s are included.

Project Team

To manage this strategy and to minimize costs, we identified three key components of our project team: 1 Project Manager (PM) and 2 Junior Project Managers (JPM).

The Project Team will have the task of managing the entire life cycle of the project. It has also the role of teaching to all the professionals involved the project development strategy, including the warehouses' operators to manage the new shipping methods.

The Project Manager will coordinate the team and will have the task of supervising the proper functioning of the activities. He is responsible for all the key activities involved.

The junior Project manager will have the task of carrying out all those technical activities for the proper functioning of the strategy. The JPM will monitor progress, allocate resources, delegate tasks to be carried out, all in close liaison with the PM.

Milestones

Having considered environmental, operational and financial aspects of the project, we decided to split it into 4 milestones Amazon Green Community strategy implementation.

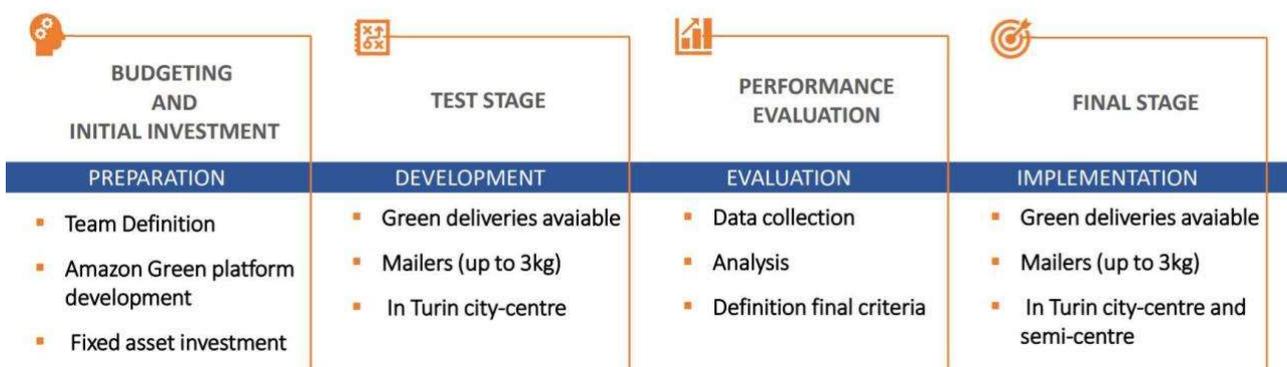


Figure 7.1 Milestones.

The image above describes the development of the strategy from day one to the final stage. All the operations have the aim to reduce the impact of logistics, minimizing the impact on efficiency and reduction of costs.

Annex 1

Structural Costs Table.

	Annual Cost	Unitary Cost
Platform development	\	€ 50.000
Project team (1 senior + 2 junior)	€ 216.000	\
Aws	€ 5.000	\
Facilities investments	\	€ 100.000
Marketing & Rewards	€17000 - €34000	\

Total Structural Costs (Year 1)	€388000 – €405000
Total Structural Costs (Year 1 to 3)	€864000 – €915000

Annex 2

Vehicle Kilometer-based Costs Table.

	DIESEL VEHICLE	FUEL VEHICLE
KILOMETRIC COST €/KM	€ 2,68	€ 2,70
COSTS (ON 25.000 KM)	€ 67.000	€ 67.500
INTRODUCTION OF CARGO-BIKES AND MOBILE DEPOTS		
VANS COST (ON 18.750 KM)	€ 50.250	€ 50.625
CARGO-BIKES COST (ON 6.250 KM)	€ 6.375	€ 6.375
TOTAL COSTS (ON 25.000 KM)	€ 56.625	€ 57.000
COSTS SAVINGS	€ 10.375	€ 10.500
SAVINGS ON 25.000KM DELIVERIES WITH CARGO-BIKES %	15,49%	15,55%

Annex 3

Vehicle Kilometer-based CO₂ Emissions Table.

	DIESEL VEHICLE	FUEL VEHICLE
KILOMETRIC CO2 EMISSIONS	12.28 [tons]	16.76 [tons]
TOTAL EMISSIONS (ON 25.000KM)	307.000 [tons]	419.000 [tons]
INTRODUCTION OF CARGO-BIKES AND MOBILE DEPOTS		
TOTAL TRADITIONAL VEHICLES EMISSIONS (ON 18.750 KM)	230.250 [tons]	214.250 [tons]
EMISSIONS REDUCTION (ON 25.000 KM)	76.750 [tons]	204.750 [tons]
EMISSIONS REDUCTION % (ON 25.000 KM)	25%	48,86%

Annex 4

Considering the assumptions made in the document “Managerial Analysis of Urban Parcel Delivery: Lean Business Approach”.

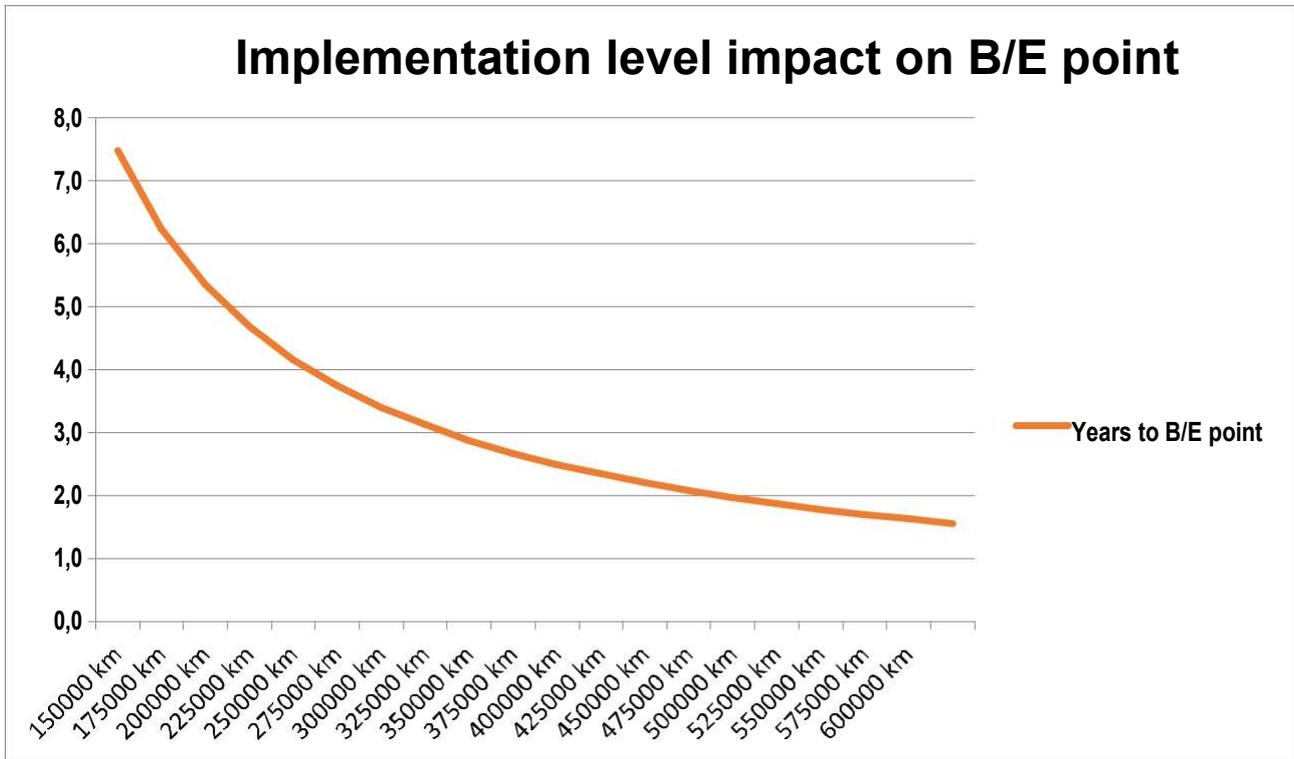
We considered:

- 25.000 km travelled every year;
- Approximately 80 delivery a day per Courier;
- 65.75% usage rate of delivery by Cargo-Bikes (extracted from a survey conducted by us);
 - Speed (vans average speed in city-center = 20km/h, in semi-center 35km/h; bikes 20km/h average in both);
- Service time (vans large delivery = 4mins, vans small parcels = 3mins; bikes = 2mins);
- Capacity (vans = 700kg; biker bag 20kg; cargo bike box 50kg) of the traditional subcontractors and green one.

The introduction of the Cargo-Bike shipping method will reduce the usage of ordinary commercial vehicles by 25%.

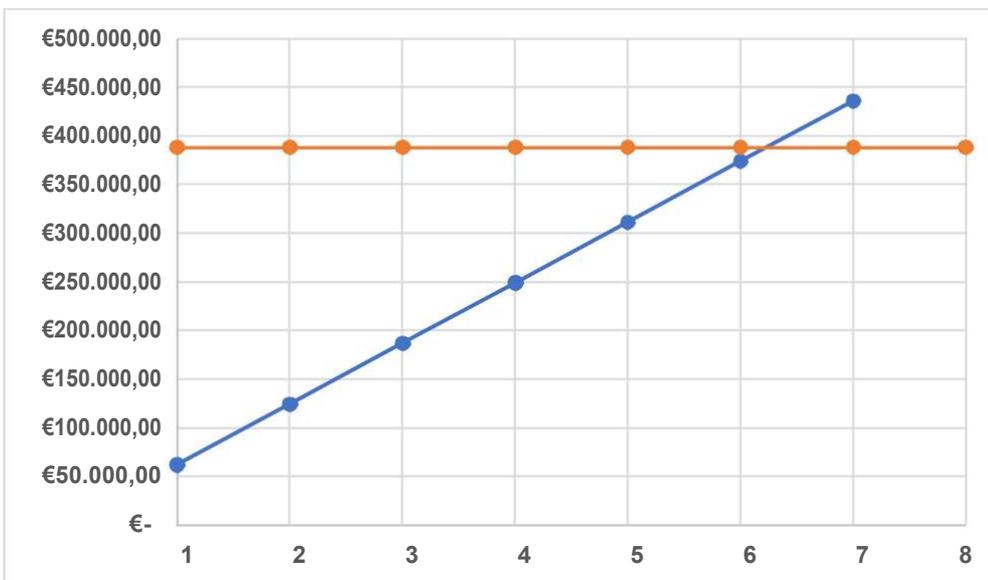
Annex 5

Relationship between kilometric level of implementation and years required to reach the breakeven point.

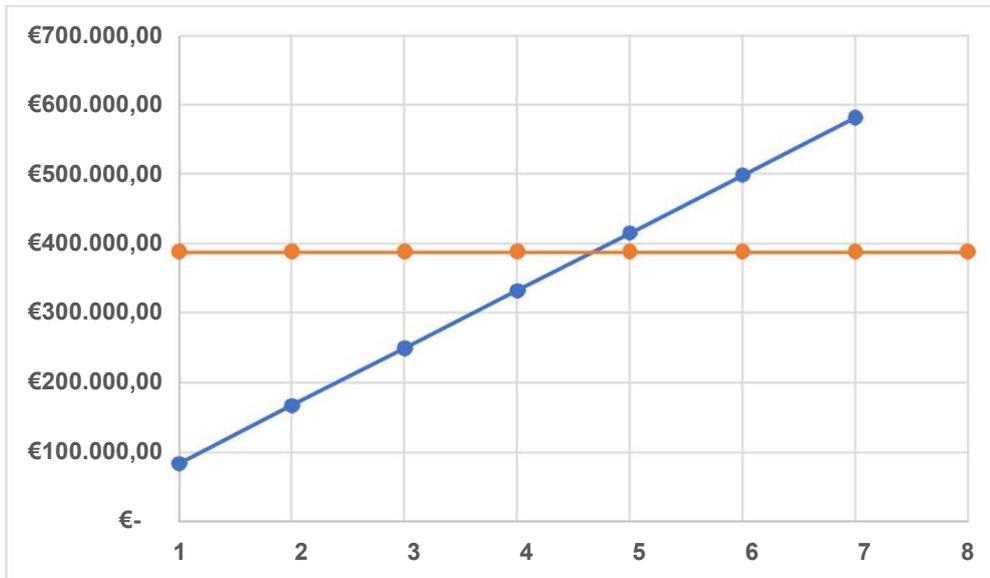


From the graph above we took some details, the following graphs show the operating savings for defined levels of implementation, their aim is to show the time required to reach the breakeven point with the initial cost in different scenario.

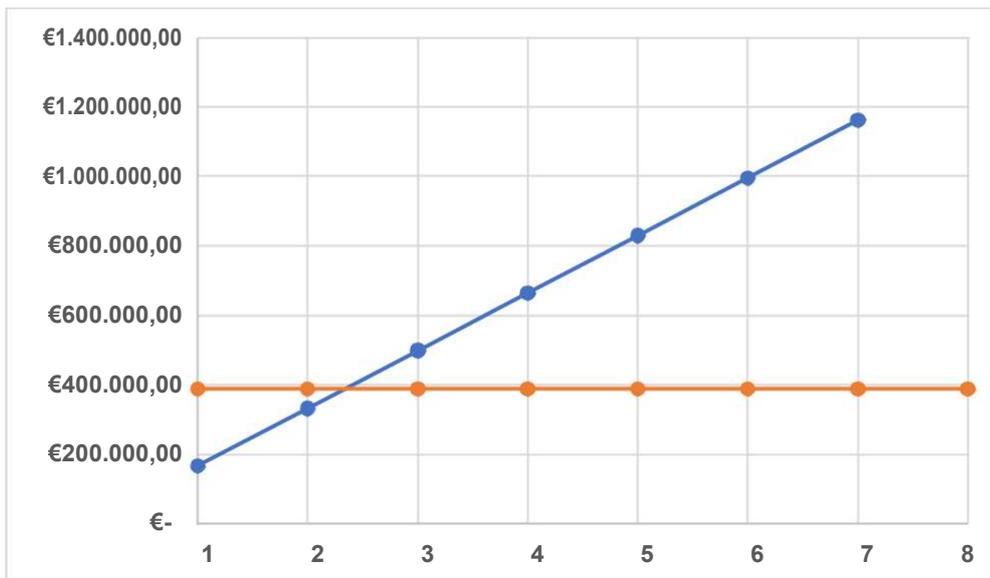
B/E point in 150.000Km implementation level scenario



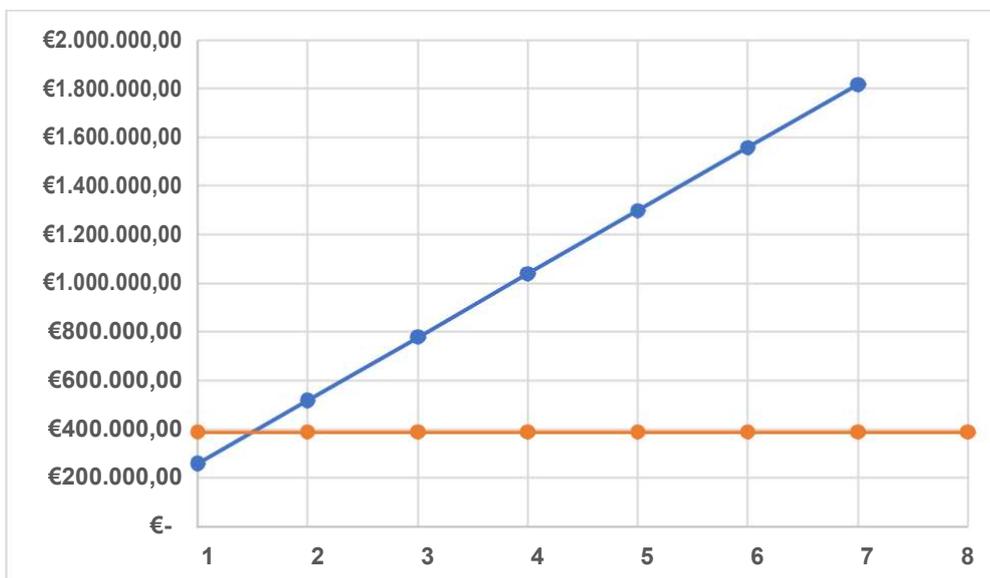
B/E point in 200.000Km implementation in detail



B/E point in 400.000Km implementation in detail



B/E point in 625.000Km implementation in detail



4.2. GUEST Methodology Analysis

Now, we will analyze this case study using the GUEST Methodology based on the information above.

Phase 1: GO

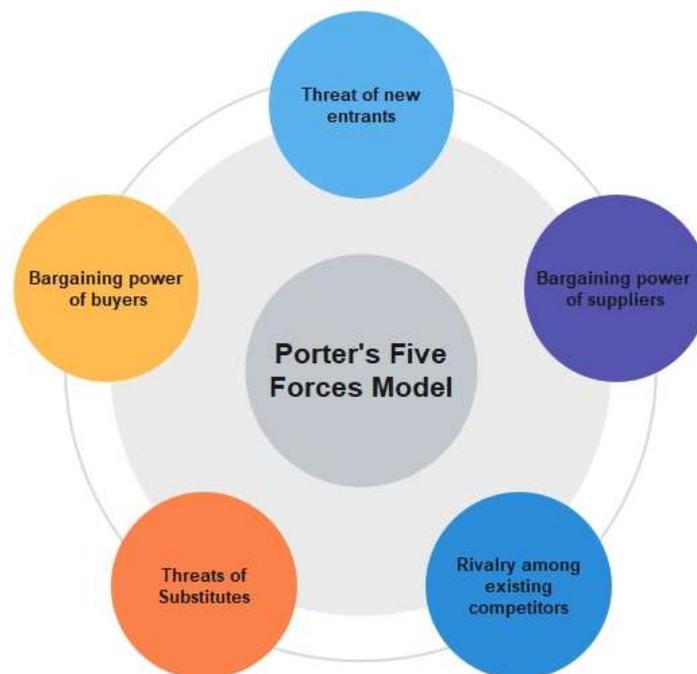
Environmental Analysis

5 Porter's Forces

To better carry out the environmental analysis in this phase of the strategy, we will refer to Porter's five forces model, applying it to reality and considering some key factors for our strategies. In 1979 Michael Porter, a professor at Harvard Business School, built an innovative tool that bears his name: Porter's Five Forces model.

We can define the tool as a reference framework that allows the user to analyze the competitiveness of an industry, through the identification and study of its five characteristic forces. This is aimed at developing a strategy that generates a competitive advantage for the company within the industrial context.

Below is a graphic representation of the model applied to our specific case.



Industry Competitors.

The first force that we will analyze is the competition in the sector, the level of competitiveness is closely linked to this force for most industries.

The main sector in which the company operates is ecommerce, its market is highly competitive, and the main competitors can be identified as eBay and Alibaba (with its group). Amazon has been a leader in this area in recent years, providing a more efficient and more customer-oriented service than its competitors thanks to Amazon Logistics. In fact, Amazon has very strong competitors in the logistics sector as well, such as FedEx.

Considering the growth trend of the sector, Amazon cannot neglect the efficiency of its logistics in order to defend its importance on the market.

Power of suppliers.

The second force encompasses all inputs of a company all suppliers are linked to this section.

Amazon is known to have built its empire on designing a strong supplier network. Amazon has more than 1.5 million suppliers, with at least one product in stock, and this number is expected to grow in the coming years. Given a large number of suppliers and, consequently, their high interchangeability ratio, the company has enough power to enforce a code of conduct, called "Amazon FBA", which is used to intelligently integrate new suppliers into the existing network. For these reasons, Amazon is affected by low to medium-strength suppliers. Another type of supplier is a company that delivers orders on behalf of Amazon. They are not only suppliers but also competitors, weakening their power over the company given Amazon's importance in the market.

Bargaining Power of customers.

Customers play a major role in the dynamics of the sector; It is important to manage the service to develop a customer base and build their loyalty.

Amazon's strategy is broadly defined as a customer satisfaction-oriented strategy; this is linked to the possibility that the average user has to access hundreds of online sales services.

The transition costs for end-users, in most cases, are zero, and consequently, the power exercised by customers is very high.

Potential new entrants.

There is a risk of a drop in profitability linked to the entry of new companies in the sector. The analysis of this force explains how this affects our reference sector.

E-commerce is a saturated market: this means that it is very difficult to enter it, not only due to the difficulties associated with high internal competitiveness, but also due to the problems associated with creating a new network of suppliers from scratch.

Overall, we can say that the potential threat of new entrants exerts a low force.

Threats of substitutes.

The subject of this passage can be summarized within the taking after question:

"Why should customers prefer our services over those of other companies?" The threat of replacement exerts a strong force in many areas; for this we must focus on the service provided by competitors in the same market.

The only gateway to Amazon's services is the creation of an account to access the platform, like the other competitors: this highlights a zero cost of switching from one service to another. Amazon is currently the industry leader, thanks to the high-quality service aimed at satisfying the needs of each customer.

It is easy to be replaced by other competitors if they provide better service than Amazon's, so the replacement threat can be identified as a strong model strength. In fact, it must be taken into account that Amazon Green Community does not affect customer satisfaction, as it only brings added value.

As highlighted earlier in the competitors' analysis, the threat of replacement in the logistics sector should not be underestimated.

Competitor analysis.

The competition analysis process, or benchmarking, is a methodology, used in all company sectors, which allows a comparison with other companies, highlighting their strengths and weaknesses, in order to improve themselves through experience. of the others.

In the analysis, only the markets directly involved with the strategy are considered:

- 1) E - Commerce - Amazon
- 2) Logistics - Amazon Logistics

Amazon dominates the global e-commerce market, operating through its platform, largely without the presence of physical stores. Its business includes the sale of its own products reserved to the public, managing the flow of goods through the presence of warehouses, but offers the possibility for other retailers to sell their products on the Amazon platform, enriching the offer for customers even more.

To enrich the customer experience, creating a competitive advantage for the company, is the Amazon Prime subscription service: it not only eliminates shipping costs, but also provides additional services such as Amazon Prime Video and Amazon Music.

This is an advantage over the main competitors in the e-commerce market: the Alibaba Group and E-Bay.

The former offers the entire online shopping experience, integrating an indirect system that connects buyers and sellers and thus acting as an intermediary. There are no commissions, but income derived from sponsorships and ads.

The second features a very similar core business but allows members to shop and sell in two ways: buy now or via online auction. E-bay guarantees the security of transactions and protects its customers by giving users the possibility to use PayPal.

Actor ID

The Actor-ID is a document that aims to identify the main players who, directly or indirectly, interact with Amazon. The main stakeholders we have considered are:

Gain Creator

- Considering the volume of orders from Amazon, the transport companies have a large and constant number of shipments

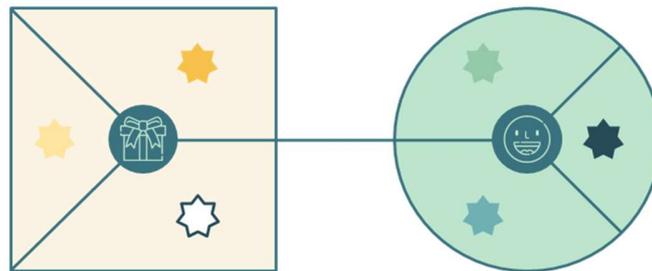
Products/Services

- Fast and high-quality logistic service.

Pain Relievers

- Amazon manages transports with an algorithm that takes into account any delays or problems and tries to optimize overall operations.

Actor: **Suppliers**
 Actor type: Transport companies
 Actor Description: Private actor hired by Amazon to send and / or collect the goods. There are 38 Amazon-affiliated private transport companies across Europe, including TNT, DHL.



- Gain creators
- Products
- Pain relief

- Gains
- Pains
- Jobs

Gains

- High volumes of shipping

Pains

- You will waste a lot of time filling up the truck, traffic on journeys and non-optimized travel routes.

Jobs

- Transport companies deliver parcels from point A to point B.

Gain Creator

- Amazon offers high quality of service and improves the customer experience (by monitoring data)

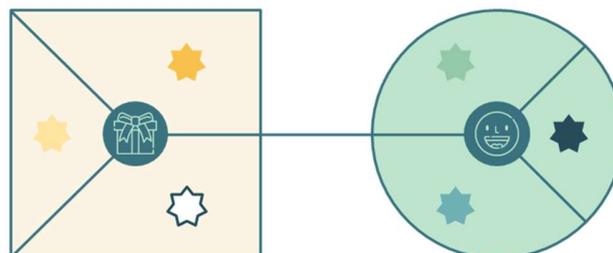
Products/Services

- High quality service with a good quality / price ratio

Pain Relievers

- Amazon tracks the entire shipping process to keep the standard of service high.

Actor: **End user**
 Actor type: Client
 Actor Description: People who use one of the many Amazon services.



Jobs

- Customers order online and receive items at home (or elsewhere), watch multimedia content, and use cloud storage service.

Gains

- To order and receive articles directly at home, to access multimedia content and files stored in the cloud anywhere.

Pains

- There are several downsides to the listed services following:-
 Streaming services: Low quality content, small catalog size.-
 Cloud storage services: Not easy to use, low level of download and upload speed.-
 Shipping services and products: Time to receive the order, to receive the damaged or missing package, low level of after-sales customer service.-
 There is no reward system

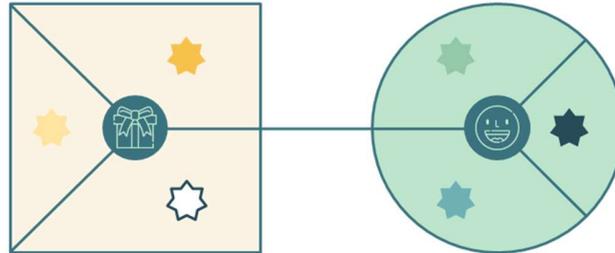
Gain Creator

- Amazon has never changed its dividend policy and has had huge and steady growth since its IPO. Furthermore, the Amazon Green Community encourages the investor to "bet" on the company, since the project encourages "greener" logistics

Pain Relievers

- Amazon has a zero-dividend policy but reinvest everything in Amazon to expand the business. This results in a steady growth in the price of market shares. This reduces Amazon's leverage and, therefore, the risk of bankruptcy.

Actor: Investors
 Actor type: Investors
 Actor Description: People who invest in the stock market to have a future capital gain.



Products/Services

- Good investment for shareholders, especially in the long term.

Gains

- The shares in the investor's portfolio may increase in price; a company can increase dividend payments by changing its dividend policy.

Pains

- The shares in the investor's portfolio may decrease in price; a company can go bankrupt; a company can decrease its dividend payment by changing its dividend policy.

Jobs

- Buying and selling stocks on the stock market

Phase 2: Uniform.

Business Model Canvas.

The Business Model Canvas is used to best represent all aspects related to the application of a strategy. Creating a category subdivision gives you a complete and comprehensive overview of all the elements involved in its development. The canvas was developed as follows.

Business Model Canvas		Designed for: Amazon Green Community	Designed by: Toir Makhamatkhujav	Date: 02.02.2022	Version: 1.0
Key Partners <ul style="list-style-type: none"> Couriers Companies and local authorities 	Key Activities <ul style="list-style-type: none"> Marketing Development of the new platform Introduction of the new platform Maintenance of the new platform Cargo-Bike Mobile Depot Key Resources <ul style="list-style-type: none"> Locker Amazon Logistics Distributors 	Value Propositions <ul style="list-style-type: none"> CO emissions reduction Service quality improvement 	Customer Relationships <ul style="list-style-type: none"> Customer service incentive-centered design community engagement program Channels <ul style="list-style-type: none"> Advertising channels Distribution channels Locker 	Customer Segments <ul style="list-style-type: none"> Amazon Prime customers (B2C) Green community 	
Cost Structure <ul style="list-style-type: none"> Marketing Platform adaptation Mobile Depot Cargo-Bike Authorizations and concessions Rewards 		Revenue Streams <ul style="list-style-type: none"> Reduction of operating costs 			

Value Proposition

Our strategy has the ultimate goal of reducing the impact that Amazon logistics generates on the environment by reducing CO2 emissions in the product delivery phase. The strategy takes into consideration the need not to negatively affect the level of service offered by Amazon and the relative value for money.

Amazon Green Community uses gamification as a technique to induce as many customers as possible to join the program, allowing them to access rewards; this addition constitutes a further added value for the end customer.

Customer Segments

The main segment that our strategies aim to reach is that of Amazon Prime users. Analyzing the composition of the segment we note that the age is between 18 and 70 years and the sex is irrelevant in this segmentation. The customer uses this service for the quality of the product, 1-2 days of delivery, for the guarantee and for the competitive price. The segment of the population is generally interested in fast delivery with the possibility of order tracking.

Another group to consider is the part of the population interested in global warming, environmental conditions and the impact of new technologies on the environment: we will call the Green Community group. These users are generally interested in air quality and, not wanting to contribute to its deterioration, may prefer a more eco-friendly solution. The age of this segment is between 18 and 50 years.

In 2014, the concerns of the population related to the environment are mainly addressed to air pollution (indicated by 50% of the interviewees), to the production and disposal of waste (47%), to climate change (42%) (estimated sample - source ISTAT 2014).

Channels

The channels considered for the development of the two strategies are those used by Amazon to manage and deliver the order, the marketing channels and the Amazon Lockers.

Advertising channels:

Website: The Amazon online platform will be used to advertise the implementation of the new strategy, focusing on the effects it has on environmental impacts; in the case of the introduction of new functions, the integration of a tutorial is also envisaged that allows anyone to use them to the fullest.

Advertising Posters: thanks to the use of advertising spaces located in strategic points of the cities, we can make our new eco-sustainable policy known to users who often use these services.

Word of mouth: customers will be encouraged to share information on news regarding our service; this channel will have a greater importance in the case of application of the Amazon Green Community strategy, as users will be pushed to share gamification information.

Distribution channels:

Trucks: movements are carried out with trucks when distances are small or medium and where there are roads.

Airplane: the movements are made with the airplane when the distances are longer.

The Amazon Green Community aims to minimize the use of these two means by introducing Green Points: the user will be encouraged to use Amazon Lockers, reducing the road traveled by trucks. By postponing the shipping date by one day, it will be possible, for some routes, to do without air transport (the most polluting phase of the shipping process).

Mobile Depot: it is considered one of the highest expressions of sustainable logistics for urban centers. This consists of the towing of a truck loaded with packages to be delivered, which also contains the cargo - bikes used for home delivery of the order.

Cargo - Bike: Using the bike to transport the order from the mobile depots to the customer (Direct Channel), with zero impact, reducing the movements of diesel or petrol vehicles.

Customer Relationship

The methods by which we will ensure high levels of relationship with the customer in the application of one of the two strategies will be listed below.

Customer Service: the relationship that is established with your customers is very important: you must always be present in supporting your users in using the application and in solving any problems, such as delays, unsuccessful deliveries or faulty orders.

Gamification: with a gamification system we encourage the customer to use the eco shipping method, with the possibility of receiving points or benefits within the marketplace. At the time of the order, you will have the option to choose standard delivery or eco mode, receiving information on the actual savings of the order itself, which will affect the final score earned by the user.

Key Resources

For the implementation of our strategy, several key resources have been identified:

Amazon Lockers: Considering their location, capacity and quantity, Lockers can be considered a key asset to the strategy. In order to make this tool effective, large distribution in the analyzed area and sufficient capacity for demand are required. In particular, we have seen that the Lockers, in the Turin area considered, are sufficient and well positioned to facilitate their use by customers.

Mobile storage: This is one of the greatest expressions of the search for a sustainable logistic solution in urban areas. It consists in the use of a trailer loaded with packages as a hub for electric cargo-bikes (Always inside the trailer) that will take care of the last-mile distribution that replaces the truck.

Amazon Logistics: This service allows you to reach a large number of customers in the shortest possible time. He is a key resource for the implementation of our transportation and delivery network development and management strategy.

Amazon platforms: on this point it is obviously essential to implement, integrating our new shipping methods and creating the gamification system.

Marketing: To understand our customers' trends, we shared a digital survey around Turin. From the data obtained, we realized that investing in marketing and advertising is essential for our strategy to involve a sufficient number of users. Mainly we need to advertise what Amazon Lockers are and where they are

(in the survey, after explaining this service to the user, the percentage of use drastically increases, around 65-80%, depending on the age group). The main objective of marketing must therefore be to make the customer feel an integral part of the whole process and make him understand that he can personally reduce emissions, choosing between various ecological actions, and therefore, earn rewards.

Our survey shows that the Amazon Green Community implementation represents a strong incentive for customers to sign up for Prime, while the rewards encourage them to choose one of the environmentally friendly shipping methods.

Key Partners

The key partners are all the strategic alliances that allow our models to function. For both of our strategies we have identified as key partners:

Companies and local authorities: all public (issued by the municipality) and private land concessions, necessary for example to implement mobile-depot stations, and all concessions that Lockers need to perform their functions.

Couriers: it is essential to continue to enter advantageous contracts with professional shipping companies, which will continue to play an important role in the delivery and collection of the order.

Revenue Streams

The introduction of the proposed strategy would not generate direct earnings, but through green shipments it will be possible to reduce the operating costs associated with delivery.

The level of "operational savings" is directly linked to the degree of use of the service, below is a table indicating the kilometric cost of transport for each means of transport, as shown the introduction of cargo-bikes would significantly reduce the shipping cost of all the routes in which this will be introduced.

Costs	Tariffs carbon tax [€/tons]	Fossil fuel vehicle	Diesel fuel vehicle	Electric vehicle	Bike
TCK [€/km]					
Annual kilometer cost		2.70	2.68	2.66	1.50
Environmental costs [€]					
Direct CO2 Emissions [tons]		4.15	3.38		
Indirect CO2 Emissions [tons]		4.15	3.38		
Equivalent CO2 Emissions [tons]		8.46	5.52		
Total Emissions [tons]		16.76	12.28		
Carbon Tax [€]	17.00	284.92	208.63		
	30.00	502.80	368.18		
	90.00	1508.40	1104.53		
	150.00	2514.00	1840.88		
Electric Battery Emissions [tons]				3.08	
Carbon Tax [€]	17.00			52.31	
	30.00			92.31	
	90.00			276.94	
	150.00			461.56	
Direct CO2 Emissions [tons]					0.00

Cost Structure

The following costs have been identified for the implementation of the Green Community:

Marketing & Rewards: we have identified the expenses related to marketing as fundamental, in order to obtain a real decrease in operating costs; it is necessary to entice a sufficient number of users to use the "green" shipping methods and it is necessary to intervene correctly in marketing.

Rewards for users are also part of this cost category, these constitute one of the focal points of gamification and the size of the investment is proportional to the use by users.

Platform: This category includes the costs of developing, implementing, introducing and maintaining the platform, including both the dedicated team and the cloud costs.

Facilities: facilities costs include the investment for the purchase of mobile depot and cargo-bike.

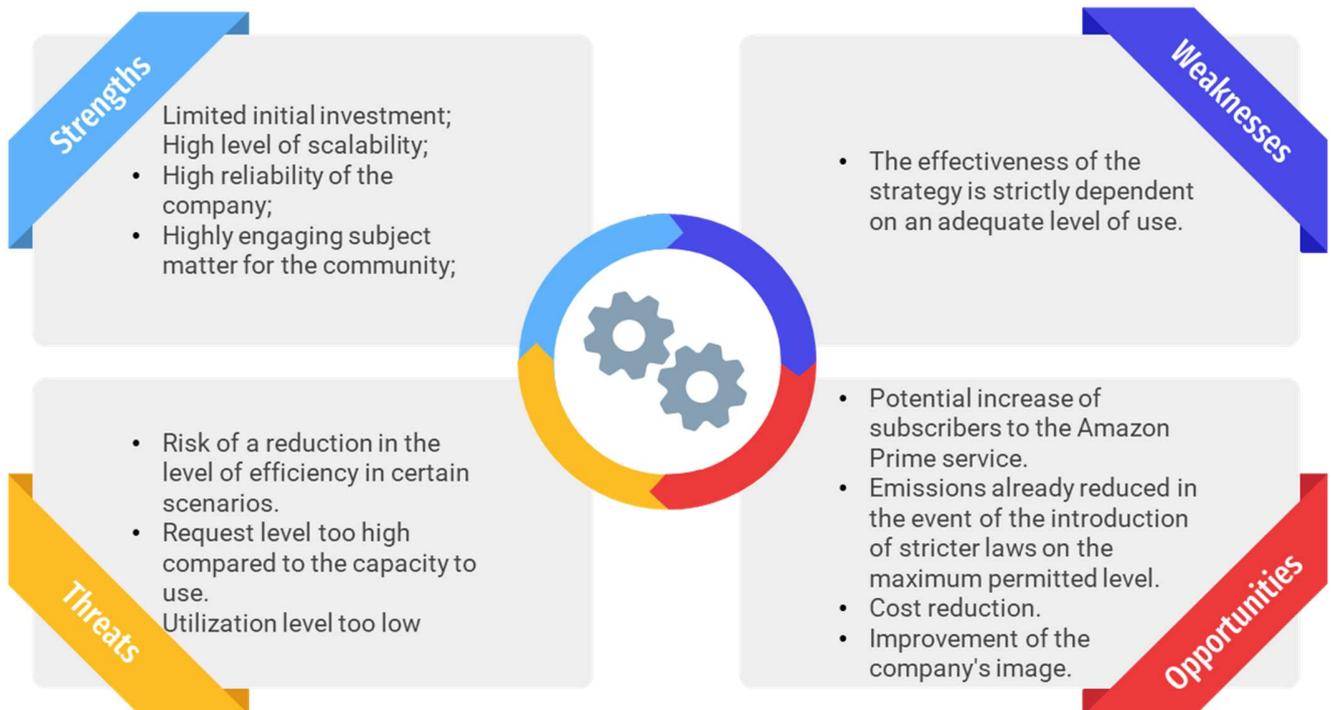
Authorizations and Concessions: it may be necessary to stipulate agreements with local public bodies for the loading / unloading activities relating to the mobile depot and its use.

Phase 3: Evaluate.

In this phase, the operational plan for the introduction of the strategy will be defined, the tools used are the SWOT Analysis, the Balanced Scorecard, and the ICE Diagram.

SWOT Analysis.

The SWOT analysis is a tool used for the identification and schematization of four factors, two internal (strengths and weaknesses) and two externals (opportunities and risks), in order to develop an effective strategy it is necessary to know these four aspects, identified as follows.



Balance Scorecard

To better define the objectives of our strategy and the priorities of each action necessary to achieve these objectives, we have relied on the Balanced Scorecard.

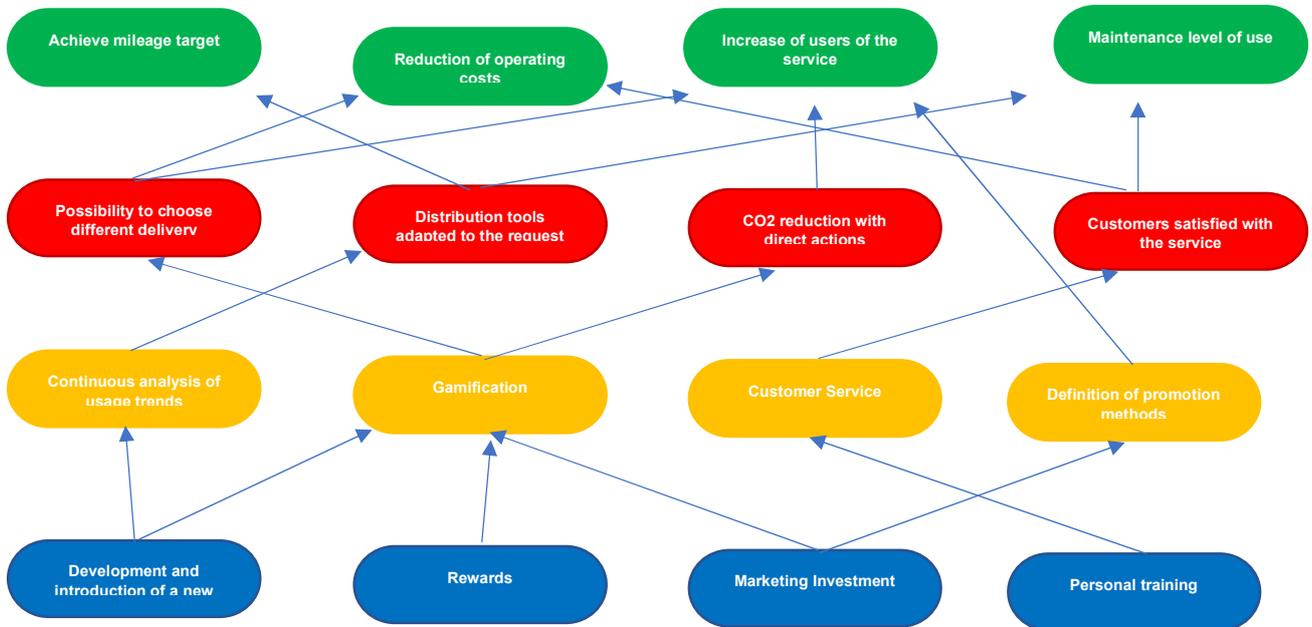
This method aims to translate a company's strategy into action by trying to analyze it through four different perspectives:

1. Financial;
2. Customers;
3. Internal processes;
4. Growth.

During the first phase, the different sections of the Business Model Canvas are analyzed through the 4 perspectives listed above and, in the Balanced Scorecard, the most important actions for the implementation of the strategy are reported. Subsequently, they are ordered by priority, giving greater importance to actions directly or indirectly linked to the creation of value.

	Key activities	Customer Relationships:	Customer segment:	Channels:	Key resources:
Financial	<ul style="list-style-type: none"> Reach mileage target Operational cost reduction Resource usage optimization 	<ul style="list-style-type: none"> Increase of users of the service Increase number of prime users 	<ul style="list-style-type: none"> Reduction of operating costs Maintenance level of use Increase in number of prime users 	<ul style="list-style-type: none"> Increase of users of the service Reduction of operating costs 	<ul style="list-style-type: none"> Reduction of operating costs New partnerships with distributors
Customer	<ul style="list-style-type: none"> Possibility to choose different delivery methods Determination of levels of emissions produced 	<ul style="list-style-type: none"> Loyalty to the program CO2 reduction with direct actions 	<ul style="list-style-type: none"> Customers satisfied with the service Positive feedback on the service 	<ul style="list-style-type: none"> Improvement of the company's image Word of mouth 	<ul style="list-style-type: none"> Distribution tools adapted to the demand Increased company visibility
Internal Business	<ul style="list-style-type: none"> Continuous analysis of usage trends New delivery methods Definition of usage criteria 	<ul style="list-style-type: none"> Customer service Feedback collection 	<ul style="list-style-type: none"> New delivery methods 	<ul style="list-style-type: none"> Definition of promotion methods New network optimization 	<ul style="list-style-type: none"> Usage level monitoring Resource removal implementation
Learning and Growth	<ul style="list-style-type: none"> Development and introduction of a new platform Platform improvement 	<ul style="list-style-type: none"> Personal training dedicated to customer service Improvement of the gamification process 	<ul style="list-style-type: none"> Rewards Customization of the service 	<ul style="list-style-type: none"> Marketing investment Feedback monitoring on the platform External feedback monitoring 	<ul style="list-style-type: none"> New partnerships with distributors

From this table, only the actions that have a direct influence on each other will be extrapolated in order to avoid too many interactions.



ICE Diagram

The ICE diagram (Identify - Control - Evaluate) is a strategic tool useful for transforming problems and opportunities that emerged from the Balanced Scorecard into actions to be planned, implemented, and monitored through measurable indicators (Key Performance Indicators).

It analyzes all aspects of the company, considers financial and non-financial parameters, with the aim of bringing the company to have strategic and monitorable inputs.

Each action that emerged from the Balanced Scorecard will be analyzed in a table consisting of 3 columns:

Identify: column in which the company's problems or opportunities are defined; includes the most important actions that emerged from the Balanced Scorecard;

Control: column where actions and steps necessary to take advantage of opportunities or to solve problems are defined;

Evaluate: the column is divided into 3 subsections: Target, Costs and Time. The targets are the KPIs, the control factors of the actions defined in the Control column; costs are the economic resources needed to implement the solution and Time includes the time frame within which the action should be implemented.

For greater clarity, we have decided to group the actions in the Identify column into four macro categories: Customer Focus, Marketing & Rewards, Platform Focus and Financial Focus.

	IDENTIFY	CONTROL	EVALUATE		
			TARGET	COST	DURATION
Customer Focus	POSSIBILITY TO CHOOSE DIFFERENT DELIVERY METHODS	<ol style="list-style-type: none"> 1. Definition of new shipping methods; 2. Implementation in the Amazon portal; 3. Agreements for partnerships, authorizations and concessions; 4. Test phase; 5. Analysis of the date and definition of the final criteria; 6. Complete implementation of the service; 7. Continuous monitoring of the service and improvement. 	<p>Achievement of target reduction of operating costs</p> <p>Reduction of CO2 emissions by at least 25%</p>	<p>Costs included in project team costs (€ 216k year)</p>	<p>During the whole project</p>
	CUSTOMERS SATISFACTION WITH THE SERVICE	<ol style="list-style-type: none"> 1. Monitoring of customer satisfaction; 2. Monitoring of internal feedback; 3. Monitoring of external feedback; 4. Actions to increase customer satisfaction; 5. Constant control. 	<p>Maintenance and continuous increase of the levels of use of the new delivery methods compared to the historical series</p>	<p>Costs included in marketing costs</p>	<p>During the whole project</p>
	CO2 REDUCTION WITH DIRECT ACTIONS	<ol style="list-style-type: none"> 1. Ability to choose different shipping methods; 2. Verification of the use of shipping methods; 3. Verification of customer satisfaction; 4. Continuous monitoring of the service and improvement. 	<p>Reduction of CO2 emissions by at least 25% of the current level</p>	<p>€ 0K</p>	<p>Long term</p>
	PERSONNEL TRAINING	<ol style="list-style-type: none"> 1. Definition of the quantity of personnel to be trained; 2. Topic definition for staff training; 3. Staff training. 	<p>Customer Service Efficiency: 100% pass personal training test</p>	<p>€ 5K</p>	<p>Immediate, Short Term</p>

	CUSTOMER SERVICE	<ol style="list-style-type: none"> 1. Definition of assistance methods; 2. Definition of support channels; 3. Definition of the amount of staff to be allocated; 4. Definition of assistance schedules; 5. Continuous monitoring and process improvement 	Customer Service Efficiency: 95% problems solved, 100% customer satisfaction	€ 5K	During the whole project
Marketing&Rewards	PROMOTIONS	<ol style="list-style-type: none"> 1. Study of the channels to be used (Web, Amazon Site, Advertising Posters and Word of Mouth); 2. Budget definition for each channel; 3. Investments in marketing; 4. Insertion of new promotion channels. 5. Process control and improvement. 	The promotion through all the promotion channels must bring a sufficient number of users to reach the KM Targets	Costs included in project team costs (€ 72k year)	Short term
	INVESTMENT IN MARKETING	<ol style="list-style-type: none"> 1. Once you have defined the best channels, start advertising on social media. 2. Advertising on public transport and in parking lots. 3. Internet advertising. 	Amazon Green Community Usage Level: Target Kilometers (575,000)	€ 10K	Before and during the entire project
	REWARDS	<ol style="list-style-type: none"> 1. Definition of Rewards to maintain the level of use; 2. Payment of Rewards in Green Points; 3. Converting Green Points into rewards; 4. Monitoring of usage trends and quantity of Green Points disbursed 	Total reward disbursement in the test phase: from € 7K to € 24K based on use	€ 7-24K	Before and during the entire project

Phase 4: Solve

Implementation of the strategy

To better analyze the next sections, it is first necessary to introduce the concept of implementation level, the size of the initial investment and the reduction of operating costs are aspects closely related to the level of implementation and level of use.

We decided to concentrate the test phase in the center of Turin for several reasons. First, we evaluated the presence of Amazon in the territory, with two development centers, two distribution centers and a sorting center: we identified Piedmont as an adequate territory.

We also took into consideration the influence that the territorial context would have had in the development, introduction and monitoring of the test phase of the strategy; with a relatively small city center it is easier to manage the test than in a city with a more dispersed center. With its small central area, Turin is a perfect candidate.

Business Model

Cost structure

The table below shows all the structural costs for the development and construction of the Amazon Green Community under test, divided into macro categories. Starting from these values it was possible to obtain reference values as regards the initial structural cost and a 3-year prospectus.

	Annual Cost	Unitary Cost
Platform development		€ 50.000
Project team (1 senior + 2 junior)	€ 216.000	\
Aws	€ 5.000	\
Facilities investments		€ 100.000
Marketing & rewards	€17000 - €34000	\

Total Structural Costs (Year 1)	€388000 – €405000
Total Structural Costs (Year 1 to 3)	€864000 – €915000

Platform Development

The first step to take for the introduction of the Amazon Green Community is the development of a platform that allows users to use it.

We have decided to integrate some new features into Amazon's current platforms:

New shipping/collection method: Bike Delivery will be added to the traditional delivery methods, which will include delivery by cargo bike.

Green delivery: This function provides for the insertion of a popup that will be activated when, by postponing the delivery date of the product, it is possible to reduce the CO2 emitted, this popup will be activated after selecting the shipping method and its activation it is optional.

Green Community: Introduction of a group of pages for managing your Green Points balance, collecting prizes, and interacting with other users.

We have estimated a unit cost of € 50,000 which would cover the development of the software but not its maintenance.

Project Team

When developing, implementing, and managing a project, appointing an internal team is the most effective choice to keep costs as low as possible. The annual effort is set at 216,000 euros. This figure was achieved considering a team of two junior project managers and one senior. The average annual salary per person is 72,000 euros. These annual costs do not include costs associated with software development and required cloud storage space.

AWS

Amazon's cloud service AWS standard rates cost € 5,000 per year for Amazon server storage space.

Facilities Investment

As mentioned earlier, it is important to consider the degree of implementation in relation to utilization before analyzing this section of structural costs. When calculating the structural cost, we chose to refer to a test phase that was confined to the center of Turin. Through an analysis conducted on the efficiency of the proposed funds, it was found that the required initial investment consisted of a single mobile depot covering the test area to which a reference value of € 100,000 was allocated. The Cargo Bike is not included in these costs as purchase and maintenance are included in the operating costs.

Marketing & Rewards

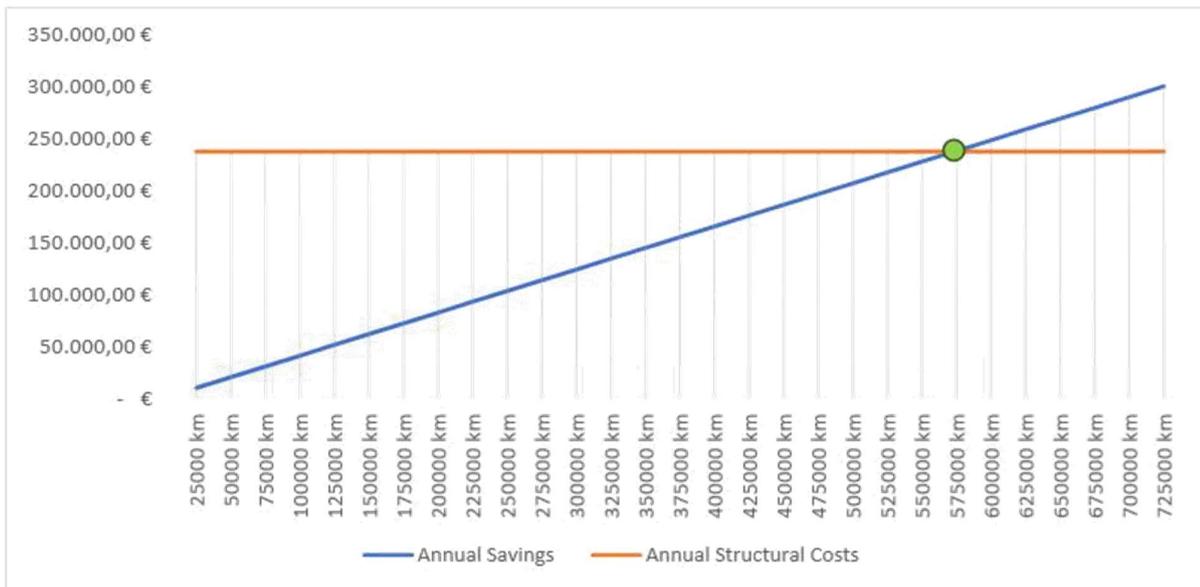
Marketing and bonus spending is closely correlated with service usage, so the initial budget for the trial period is set at € 17,000 to € 34,000. As the use of the service increases, the capital required to meet the reward demands of users will increase. Therefore, consider the previous number as a range to track in the test phase. For large implementations, this value should be increased.

Scalability Charges

From the test phase, trends in the use of new shipping methods will be collected. From the analysis of trends, associated with the level of implementation that wants to be achieved, it will be possible to define the size of the investments to be made from the point of view of resources. In particular, it is necessary to understand the capacity required in terms of mobile - depot and cargo - bikes with respect to demand, as well as the increase and/or expansion of Amazon Lockers.

Reduction of Operating Costs

The introduction of the strategy does not entail new direct profits, to be able to return to the initial



investment, a reduction in operating costs has been envisaged in the case of delivery of the introduction of Bike Delivery: these are calculated starting from some hypotheses of use, i.e., 25,000 km routes for deliveries.

The scenario is taken into consideration in which 75% of the route carried out by the traditional courier, with the introduction of Bike Delivery, will be carried out by the mobile depot, only 25% of the route will be carried out by cargo - bikes.

The operating costs related to the cargo-bike are considerably lower than those of traditional means of delivery and therefore we see how the replacement of the traditional means in favor of the cargo-bike in 25% of the distance traveled generates a reduction of more than 15% of the operating costs.

Breakeven Point

Starting from the analysis of structural and operational costs, which will be potentially reduced, it is possible to identify a breakeven point, related to the level of use, as shown in the figure.

The figure shows the annual structural cost in orange, the annual savings on operating costs in blue. Considering that the amount saved annually on operating costs is directly linked to the level of kilometers

traveled per year and considering the various scenarios reported, we identify the achievement of the breakeven point on annual costs at a level of use and implementation of 575,000 km traveled. year.

Effects on CO2 emissions

We have already introduced the "green" shipping methods aimed at reducing CO2 emissions from Amazon's last-mile delivery, we will now quantify this reduction to give a reference value.

As for the introduction of Bike Delivery, with the use of mobile-depot and cargo-bike, the reduction of CO2 emitted is analyzed in the table below.

The last aspect to consider is the Green Delivery, this can be selected when the CO2 emissions, related to the shipping methods of the order, can be reduced by postponing the delivery date from 1 to 4 days, in some scenarios it is possible to reduce the related CO2 emissions up to 84%.

Conclusion

The main mechanism for the development of the economy of our time are innovative start-ups. They cover not only scientific and technological progress, but also the ways of its implementation as a main product. The most successful business ideas can quickly change the direction of the global economy and society as a whole. By tracking and analyzing innovations, you can predict which industries will become the most profitable in the foreseeable future.

Developed countries have been quickly creating "green" technologies in recent years as part of their implementation of an environmentally focused growth plan. Various government initiatives, as well as new opportunities for businesses in an environmental market that is quickly developing due to consumer demand are the most important growth drivers.

There is no singular definition of "green" or eco-friendly (environmental) technologies, as there is for the green market and other comparable definitions. The overall strategy is to meet their major goal of minimizing negative environmental effect, for example, by reducing waste, enhancing energy efficiency, and improving design to reduce resource consumption.

Green technologies, in reality, cover every sector of the economy: energy, manufacturing, transportation, construction, agriculture, and so on. They are currently being used across the full value chain of a company's operations, including production, consumption, management, and production procedures.

Above, we analyzed Amazon Green Community, one of the green start-ups, using the GUEST methodology. Using the data presented in this case, we clearly defined the position of all market participants using the tools provided by the GUEST methodology.

In the "Go" phase, which is the first phase of the methodology, all factors related to the startup were sorted out. Tools such as Porter's 5 forces and Actor ID helped a lot in sorting the data. In particular, the fact that the Actor ID tool is presented in tabular form is also useful when reporting to stakeholders. This is because all the information is clearly reflected in it.

Choosing the Business Model Canvas, which displays the entire business plan in one table in the "Uniform" stage, demonstrates how simple and convenient this methodology is.

The “Evaluation” phase, which is an important step in the methodology, analyzed competitors, customers, and the Amazon Green Community delivery services market. Such business tools as SWOT, Balance scorecard, ICE were used.

The Solve and Test phases of the GUEST methodology focused primarily on the financial health of the Amazon Green Community startup. Accordingly, the city of Turin was chosen to test this startup. The reason is that this area, small and densely populated, was suitable for testing a startup. It was concluded that bicycles selected for delivery to reduce CO2 emissions would cover 75% of the total distance, with motorcycles and vans covering the remaining 25%.

In conclusion, this methodology offers the users (business owners) only the tools they need. In this way, the businessman will be free from unnecessary tools and will be able to properly analyze their business.

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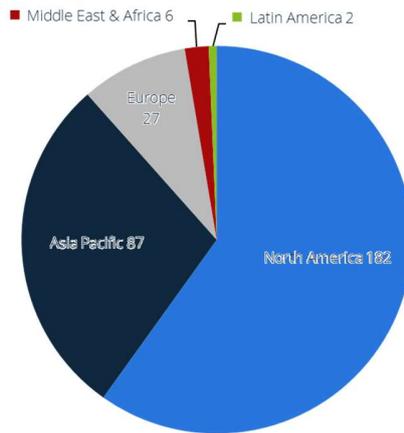
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Annex 1.

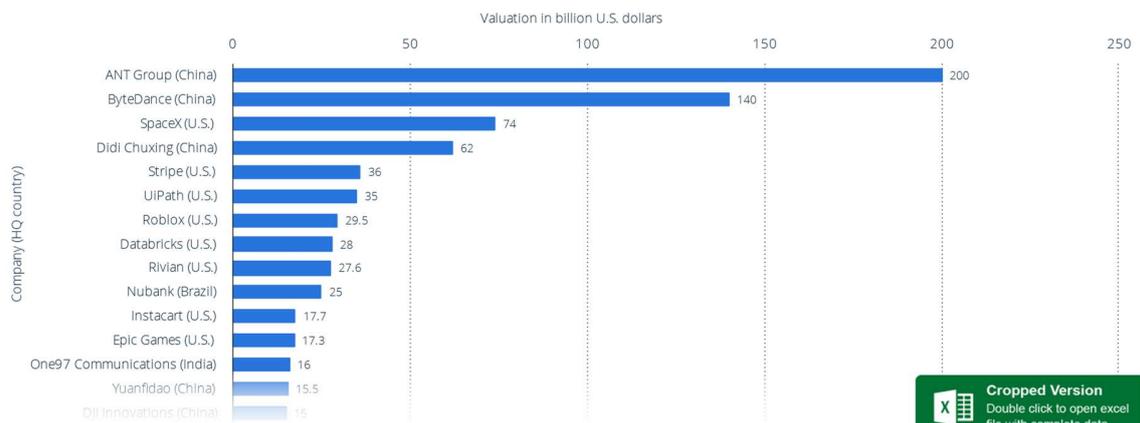
Number of unicorn exits worldwide as of July 2021, by region

Number of unicorn exits globally 2021, by region



Leading unicorns worldwide as of April 2021 (in billion U.S. dollars)

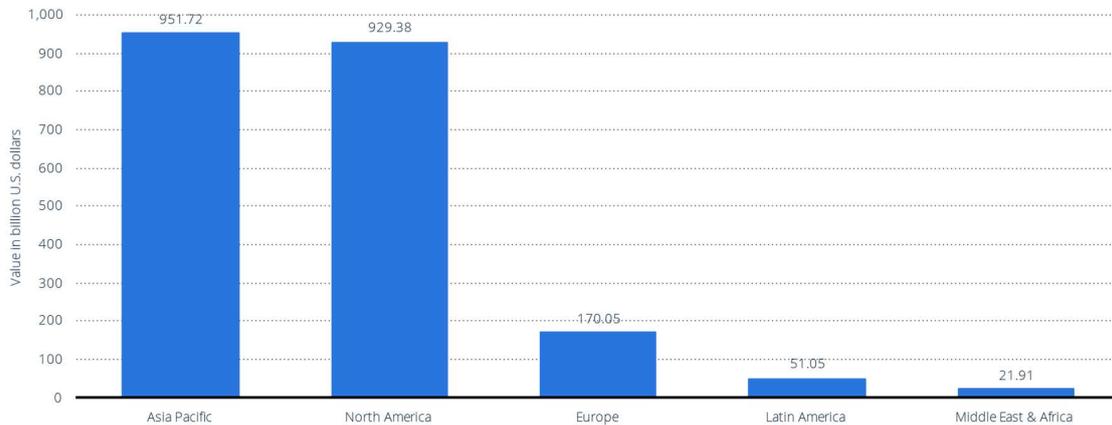
Highest valued unicorn companies worldwide 2021



Cropped Version
Double click to open excel file with complete data

Market valuation of unicorns worldwide as of April 2021, by region (in billion U.S. dollars)

Market value of unicorns worldwide as of April 2021, by region



Note(s): Worldwide; April 2021

Further information regarding this statistic can be found on [page 39](#)

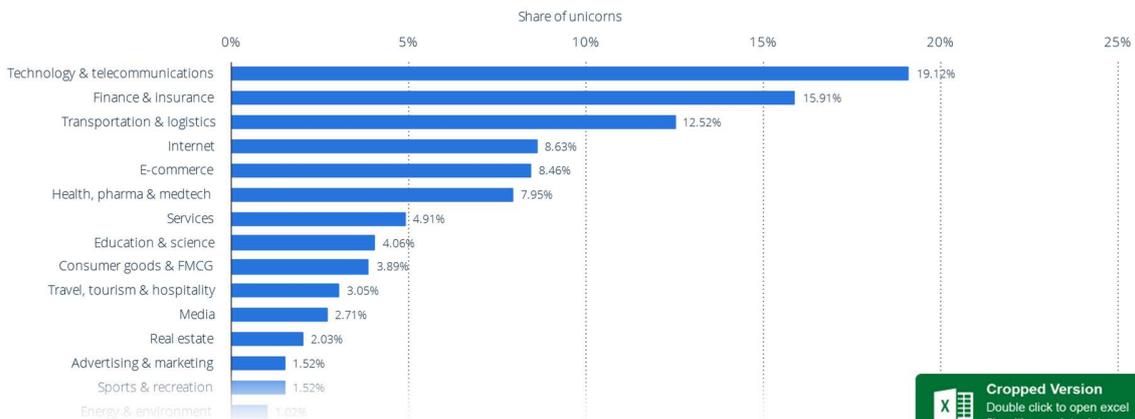
Source(s): Statista estimates; CrunchBase; CB Insights; Hurun Research Institute; Tracxn Technologies; Holoni [ID 1092609](#)

High-performing startups **statista**

16

Distribution of unicorns worldwide as of April 2021, by industry

Share of unicorns worldwide as of April 2021, by industry



Note(s): Worldwide; April 2021

Further information regarding this statistic can be found on [page 42](#)

Source(s): Statista estimates; CrunchBase; CB Insights; Hurun Research Institute; Tracxn Technologies; Holoni [ID 1092753](#)

High-performing startups **statista**

19



Annex 2

25 Essential Lean Tools

Tool	The essence of the events	the effect
5S	<p>Proper organization of the workplace:</p> <ul style="list-style-type: none">• Sort + remove what is not used• Arrange in convenient order what is used• Maintain cleanliness and order• Create control standards• Improve by applying established standards.	<p>Relatively fast identification of problems in production, caused by improper organization of the workplace and bringing them together to minimum (for example, getting rid of deposits of tools that were used a month ago, and Now they just make me waste my time search among them for what you need).</p>
Andon	<p>A system that immediately also informs about emerged in production process problem and allows you to stop the process until the detected defect became massive.</p>	<p>Timely elimination of the problem, which allows no further spend resources on elimination of the consequences of an error in global scale.</p>
Bottleneck analysis	<p>Finding a "bottleneck" place of production ("bottleneck"), not allowing you to create more products for less time. Expanding</p>	<p>The weakest element is improved by production, in other words: "Weak links, goodbye!"</p>

	the bottleneck improves productivity and capacity output.	
Continuous Flow	Alignment of production flows in an optimal way. The process, built correctly, is not means filling the "buffer" and no long stoppages between production steps.	Elimination of waste such as ill-conceived transportation, excess inventory, waste of time.
Gemba (Battlefield)	Formation of understanding that all the most important things happen on production, and not in leadership offices.	Management is involved in production process, which allows you to strengthen discipline, reduce response time to emerging issues and receive information from original source.
Heijunka (Planning)	Ability to plan orders in a special way. Customer orders are divided into several small parties that line up in in a certain order. It becomes possible to produce different products as quickly and reduce the risk of disruption to the production process by different stages and failure to deliver the finished product to the customer.	given lean tool leads to the fact that the need to have a stock of materials, production time is reduced. He makes it possible to reduce losses due to the fact that each type of product is manufactured more often, and inventories (in other words, frozen assets) are reduced to the required minimum. When the line is forced to stop the enterprise

		has all the products necessary for the client.
Hoshin Kanri (Policy Deployment)	Building a link between “strategy” and "tactics": the goals of leadership with actions of production representatives.	Leadership sets goals for each employees, they move to this direction. Sufficient communication between management and workers to reduce losses. IN company must be implemented <u>task manager</u> to use the Hoshin tool Kanri .
Jidoka (Autonomization)	The equipment is partially automated. The search for the problem takes place in automatic mode. It is possible to stop production when an error is detected.	One employee can control the operation of several devices at once. This leads to reduce the cost of production, and also leads to minimum costs for troubleshooting (in compared to those if if they were not found straightaway same, but only in end of production cycle).
Kaizen (Permanent improvement)	Using kaizen tools is a combination of efforts of all employees of the enterprise in direction of the formation of a special corporate	Synergistic effect from combining the efforts of employees aimed at cost reduction becomes essence of the "perpetual motion

	<p>culture and achievement of common goals.</p>	<p>machine" of the progression of lean manufacturing on enterprise.</p>
<p>JIT, Just in time</p>	<p>Production and delivery system based on "pulling" what the client needs for a given point in time, the quantity of production. At the same time, the projected demand for almost no calculation is taken. Requires availability for production of such systems as " Continuous Flow ", " Kanban ", " Takt " time " and " Heijunka ".</p>	<p>This method is most effective when it is necessary to reduce the number of manufactured products, stocks of raw materials and the size of the production facility. Contributes to the optimization of financial flows.</p>
<p>Kanban (Pull System)</p>	<p>Regulates the flow of manufactured products and raw materials inside and behind outside of production. Need in components or finished products is determined with with signal cards.</p>	<p>Reduced losses and excess stock. has a positive effect on inventory results for stock.</p>
<p>KPI (Key Performance Indicators)</p>	<p>The metrics system is used to analyze the priority segments of the company's activities. It is a powerful growth stimulator for employees.</p>	<p>Key indicators that can be changed by employees allow timely identification of potential losses and risks, achieve the strategic goals set for the company.</p>

<p>Muda (Loss)</p>	<p>Getting rid of everything that is not represents value for the customer (consumer).</p>	<p>Having learned all possible types of losses, one should timely detect and minimize, improving the quality of work of personnel, equipment and organizations in in general.</p>
<p>PDCA (Plan-Do-Check-Act)</p>	<p>An iterative method that allows you to implement all sorts of improvements and / or make changes:</p> <ul style="list-style-type: none"> • Plan (create a detailed plan) • Do (implementation of the plan) • Check (achievement control) • Take action (revision of the actions taken with efficiency point of view, developing more productive actions if necessary) 	<p>PDCA allows you to find a systematic approach to problem solving, implementation of improvements and do experiments:</p> <ul style="list-style-type: none"> • Plan (Hypothesize) • Do (turning hypotheses into a life) • Check (assessment of the effectiveness of actions) • Take action (implement changes, try again)
<p>OEE (Overall Equipment Effectiveness)</p>	<p>Allows you to track three types of losses related to equipment operation: quality, availability, productivity.</p>	<p>Allows you to understand how efficiently the equipment is being operated. This is a balanced indicator that allows you to increase the</p>

		<p>profitability of production and improve its manufacturability. If OEE reaches 100%, then the company releases a product without defects, as quickly as possible with taking into account available technologies, allowing downtime.</p>
<p>Poka - Yoke (Protection from errors, protection against fool)</p>	<p>Creating methods that prevent errors from appearing in production process. The main goal is to achieve "0% defectiveness".</p>	<p>Costs associated with error warning is significantly lower than those carried by the company during regular inspections and, moreover, when correcting a marriage that was revealed after a long time.</p>
<p>Root Cause Analysis</p>	<p>These factors have no place in production. Their detection is done by principle of "five whys".</p> <p>That there is a need to ask the question "Why?" not less than 5 times by towards each factor that negatively affects production.</p>	<p>Eliminating the root causes of problems helps avoid similar situations in the future.</p>

<p>Visual Factory (Visualization of production)</p>	<p>Simple indicators are used. FROM them through the exchange of information.</p>	<p>Each employee understands the current situation based on information system data (color, sound and other signals).</p>
<p>VSM (Value Stream Mapping, Value Stream Map)</p>	<p>A Lean tool that allows you to visually separate value-adding processes from not adding her.</p>	<p>A convenient solution for planning future changes.</p>
<p>TPM (Total Equipment Maintenance)</p>	<p>Lean manufacturing method, the essence of which is to attract to maintenance of the equipment of each employee of the company, and not only technicians. The purpose of TPM is to increase equipment life and efficiency.</p>	<p>Reducing the number of downtime, errors in working with equipment, accidents. Strengthening the sense of responsibility of each employee.</p>
<p>Takt time</p>	<p>Periodicity indicator, s which the customer orders the product. Also, the takt time can display the time interval in which which the company provides the customer with the manufactured products. Can be calculated using the formula: Planned production time / Consumer demand.</p>	<p>Allows you to determine the required performance of a specific production area within order to meet customer needs.</p>
<p>Standardized work</p>	<p>Instructions for close to perfect performance of a specific operation.</p>	<p>Losses are reduced (due to the use of only the best</p>

	<p>This document is constantly reviewed and is being updated. If available in companies of the same equipment, it must work according to a single standardized method (optimum). Maximum efficiency is achieved when using interactive documents that can be quickly modified and to complement.</p>	<p>experience). The risks of creating a low-quality product are reduced.</p>
<p>SMART (Smart Goals)</p>	<p>This abbreviation contains the following words: Specific, Measurable, Attainable, Relevant, and Time-Specific. IN Russian version it sounds like this: the goal is specific, measurable, achievable, relevant, defined in time.</p>	<p>With poorly thought-out communication or an erroneous understanding of tasks, losses inevitably occur. Correctly set goal allows to eliminate this problem.</p>
<p>6 Reasons for Decreased Performance</p>	<p>TO The most common reasons for performance degradation include the following: breakdowns, adjustments, short shutdowns, slowdowns, failures in work, refusals production.</p>	<p>All these reasons are a call to action. Downtime can only be reduced by addressing all problems consistently.</p>
<p>SMED (Quick Changeover)</p>	<p>Tools set manufacturing, based on principles of lean manufacturing, allowing much faster debugging of equipment (up to 10 minutes). The change is made to base on two</p>	<p>It becomes easier to produce small batches of products, increasing the useful life of the equipment.</p>

	<p>actions: internal and external. Internal actions are associated with stopping the equipment, and external can be performed and while the device is running. The SMED technique involves the transformation of actions from internal to external.</p>	
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