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Relatori:

Guido Perboli

Correlatore:

Stefano Musso

Candidato:

Martin Segreto

*Alle persone che amo,
Ai miei affetti più cari,
Alle mie sorelle e ai miei genitori*

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1 Introduction

1.1 Background Information

The GUEST methodology was developed by Prof. Guido Perboli and Dr. Renzo Gentile, with the contribution of Prof. Teodor Gabriel Crainic, Dr. Cristina Incannella and Prof. Roberto Tadei. GUEST stands for Go, Uniform, Evaluate, Solve and Test. It constitutes a process useful to drive and coordinate the decisional process in the Multi Actor Complex System in which a firm operates and the method has been applied in several different projects (both with private companies and EU funded) in the past. It is based on a set of documents, rules and management tools that find application into real market contexts, in the production or in the services industry, involving many stakeholders in different organizational layers, sharing the common intention of the same Project Goal, despite different interests. In this thesis, the candidate will analyze each phase of the GUEST methodology from a theoretical perspective, especially when a managerial tool is mentioned and has to be applied and used. Therefore, the first descriptive analysis will have the purpose to let reader understand the composition of the methodology through analyzing, in a structured way, the list of the steps in which the method consists. Then, the candidate will propose different alternatives to apply in different steps that could improve the methodology effectiveness, evaluating the feasibility in adding new modules to extend the range of applicability for both in terms of topics covered and for new possible target customers. The natural outcome will result in an increased number of metrics to monitor, new evaluate and control procedures for the performances of specific areas, and this will lead to propose a reformulation of the GUEST methodology into an enhanced version, considering the substitution and integration with the new contents added. The new GUEST proposal will have the same purpose of the original version, but within it, there will be distinguished new areas that weren't considered before. The new version will be composed differently with respect to the original, even if it will follow the same macro-structure with particular focus on actual topics, such as the environment. In the end of this thesis work it will be possible to deep dive into a real use case using the different, new GUEST alternative. It is important to mention that for the same real use case, in the past it has been already applied the original GUEST methodology, and hence it will be possible to understand the difference brought from the topics recently introduced within the methodology. Within the same part, it will follow a draft of a possible roadmap for the simulation launch, on top of the initial consideration and once the GUEST have been fully applied.

2 GUEST: As - is Walkthrough

2.1 GO PHASE

The GO phase is the very first step of the entire process where the main goal is to collect information about the company and the environment in which the firm operates. Such description will be useful to get a base of knowledge of the context and will be adopted to describe a landscape picture obtained through strategic assessments from wide perspectives.

The GO phase uses several management tools, that are listed below:

- PEST analysis
- Porter's 5 Forces
- Social Business Network
- Actor ID
- Design of a Value Ring

2.1.1 Pest Analysis

The PEST Analysis (Political, Economic, Social and Technological) is a strategic managerial tool with whom a company can evaluate external factors that influence or that might will influence its daily operation, while trying to become more competitive in the market.

The model focusses the analysis on the four areas that cover a central role for this model. This type of analysis is used to identify and evaluate external factors that could impact the profitability of a company. Typically, it is more effective with larger organizations that are more affected by the effects of macro events. A more efficient strategic planning can be eased by a well-defined and complete comprehensive assessment of the major areas that can affect the sector in which an organization is operating as well as the position of the organization itself. The planning action maximizes the capitalization of the firm and, in looking forward, the company can be ready for future changes, so that the company can maintain the competitive advantage with respect to rivals.

The PEST has, as first step, the scope of an analysis in the Political contests and on such areas in which the economy is affected by government policy, institutional decisions and/or changes in legislation or the specific sector. Tax and employment laws can be object of the governmental policy that may particularly affect a company.

In the PEST analysis is also analyzed the economic perspective that has as targets crucial objects of interest such as economic growth, exchange rates, supply and demand, inflation and recession. This can impact the exchanges within the country or the import/export with the rest of the world.

Within the social factors that are included in a PEST Analysis figures the age distribution and demographics data, cultural information elements such as lifestyle trends. Carrying out an activity in some geographic area can be significantly different from having the same activity in another part of the world, and this is due to the different social and cultural factors that influence the behaviors that the local population assume.

About the technological factor considered in the PEST analysis, it is studied the specific role that the technology has for the business case. It is also possible to focus on the development of technologies within the industry sector, as well as the emerging trends or possible future changes in technology. Governmental investments and special funds aimed to technological research and development could represent a topic of interest in this field.

Therefore, the PEST Analysis can help a company in exploring, finding and, at the end, try to capitalize through effective actions an opportunity that is occurring and take advantage of the actual/future scenarios. The PEST analysis is often used to discover imminent or possible future challenges, helping the management for a conscientious planning on the most suitable actions that are required to respond and adapt the company to the change. The PEST Analysis can also be applied to identify strengths and weaknesses in evaluating internal structure of an organization and, possibly, helping in the re-design of functional units inside and their relationships.

P Political	E Economic	S Social	T Technological
<ul style="list-style-type: none"> ecological/environmental issues current legislation home market future legislation international legislation regulatory bodies and processes government policies government term and change trading policies funding, grants and initiatives home market lobbying/pressure groups international pressure groups wars and conflicts 	<ul style="list-style-type: none"> home economy situation home economy trends overseas economies and trends general taxation issues taxation specific to product/services seasonality/weather issues market and trade cycles specific industry factors market routes and distribution trends customer/end-user drivers interest and exchange rates international trade/monetary issues 	<ul style="list-style-type: none"> lifestyle trends demographics consumer attitudes and opinions media views law changes affecting social factors brand, company, technology image consumer buying patterns fashion and role models major events and influences buying access and trends ethnic/religious factors advertising and publicity ethical issues 	<ul style="list-style-type: none"> technological competing technology development research funding associated/dependent technologies replacement technology/solutions maturity of technology manufacturing maturity and capacity information and communications consumer buying mechanisms/technology technology legislation innovation potential technology access, licensing, patents intellectual property issues global communications

Figure 2.1 – PEST Analysis Model Template

2.1.2 Porter's Five Forces

The second managerial tool used in the methodology is the Porter's Five Forces: it is used to identify and analyze five competitive forces that can be found in every industry and helps determine the industry's weaknesses and strengths. Porter's 5 Forces analysis is often adopted to find and describe the industry's structure and consequently ease the definition of a corporate strategy. The model can be adopted and applied to any company and any belongings business unit or segment, in order to evaluate the level of competition within the industry and, if used properly, can help in increase the firm's long-term profits.

The Porter's Five Forces represents a strategic analysis model that helps to understand why different industries are characterized by their natural differences (e.g. number of operating firms, customers segments, and profitability levels). The model was published in 1980 by Michael E. Porter, in the book "Competitive Strategy: Techniques for Analyzing Industries and Competitors" and today the Five Forces model is widely diffused to analyze and provide a deep understanding of the industry structure while furnishing answers to the questions of corporate strategy. The model deals with the application of the five forces to a real business: the 5 forces cover a crucial role in shaping every market and industry in the world and, these forces (figure 2.2), are often used to measure competition intensity, attractiveness of a sector, and profitability of an industry or market.

The Porter's 5 forces are:

1. Rivalry Among Existing Competitors
2. Threat of New Entrants
3. Bargain Power of suppliers
4. Bargain Power of customers
5. Threat of substitute products



Figure 2.2 – Porter's Five Forces Model

Porter's Five Forces is therefore a framework for analyzing the competitive environment of a firm operating in an industry. The company's profitability is influenced by the number and power of incumbent rivals, potential new competitors that can decide to join the market, number and quality of suppliers and customers. The Five Forces analysis can help to drive the company strategy to reach a competitive advantage.

The first of the Porter's 5 Forces deals with the number of competitors and their possibility to undercut, through the reduction of the prices, a company. Potentially a larger number of rivals implies a lower power of firm in the market. In fact, buyers and suppliers will turn with

a firm that is able to offer a better deal or lower prices. The other way around, when there is a low competitive rivalry, the company market share is higher, tending towards an oligopoly where the firm has greater power to charge higher prices and can set the terms of deals to gain higher sales and profits (knowing that, when shifting from an ideal situation of perfect competition in the market to a monopoly market, the social welfare decreases).

The company's power is also affected by the treats of new entrants into the market. The less time and money it cost for a competitor to enter a company's market and be an effective competitor, the more an established company's position could be significantly weakened. An industry with high barriers to entry is the most suitable condition for existing companies within that industry, because the companies are able in charging higher prices and negotiate better terms since the number of these is low.

The Bargaining Power of the Suppliers is the next factor in the analysis of five forces model and it deals with how easily suppliers can lead up the cost of raw materials or input supplies. The number of suppliers of a good or service for the firm, how rare the inputs supplied are, and how much it would cost a company to switch to another supplier (known as Hold-up problem) affects the Power of Suppliers for the analyzed firm. A lower number of suppliers into an industry, the more a firm will depend on a supplier. As consequence of this, the supplier can gain more power and raise input costs for production or could push for other advantages during the deals; on the other hand, a company can keep its input costs lower and enhance its profits when there are many suppliers or low switching costs between rival suppliers.

The third point to be analyzed in the model is the power that a customer own, in order to drive prices down. It depends on how many user/customers/buyers a company has, how significant each customer is, and how much it would cost for a firm to find new customers or markets for its output.

The last of the five forces focuses on the Threat of Substitute Products (goods or services) that can be used instead of the company's products. When similar substitutes products are available in terms of final cost/benefits, customers will have more options to buy a company's product, and a company's power can be weakened: in this situation, the risk is not only to lose the customer for the single transaction but also for the entire shopping basket, with the further risk that the client will definitively prefer the substitute products for the next opportunities.

2.1.3 Social Business Network

The social Business Network is a tool used in the GO phase to describe in an iconographic way the firm's environment. In the representation will figure the actors involved, the nodes of different sizes and types. The connectors are represented with unidirectional or bidirectional arcs that link the different entities of the model. While doing so, three main hypotheses are carried out:

- Is supposed interdependency between the actions of different actors
- The relational links are channels for the resources transfer among the actors or entities
- The network models are considered structural environments that can provide opportunities or constraints for actors/entities actions

The actors involved in the Social Business Network can be listed and identified through different icons and colors (as shown in the figure 2.3) and their nature can be split accordingly to the following list:

- Enterprises
- Clients/User/Stakeholder
- Authority
- Competitor

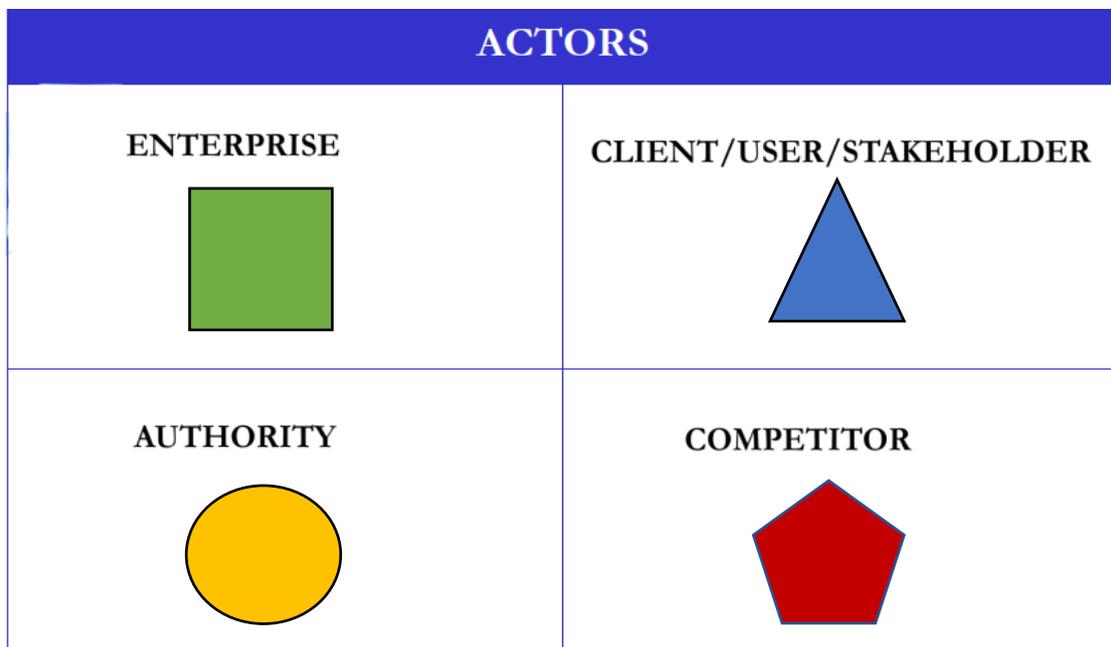


Figure 2.3 – Actor's identification symbols

Therefore, each actor is connected into the model to other entities among links that depend on the type of relationship that exists between them. The relationship can be divided by type of the link (shown in the image 2.4), which can be of the following types:

- Commercial
- Regulatory
- Partnership/Stakeholder
- Competitor

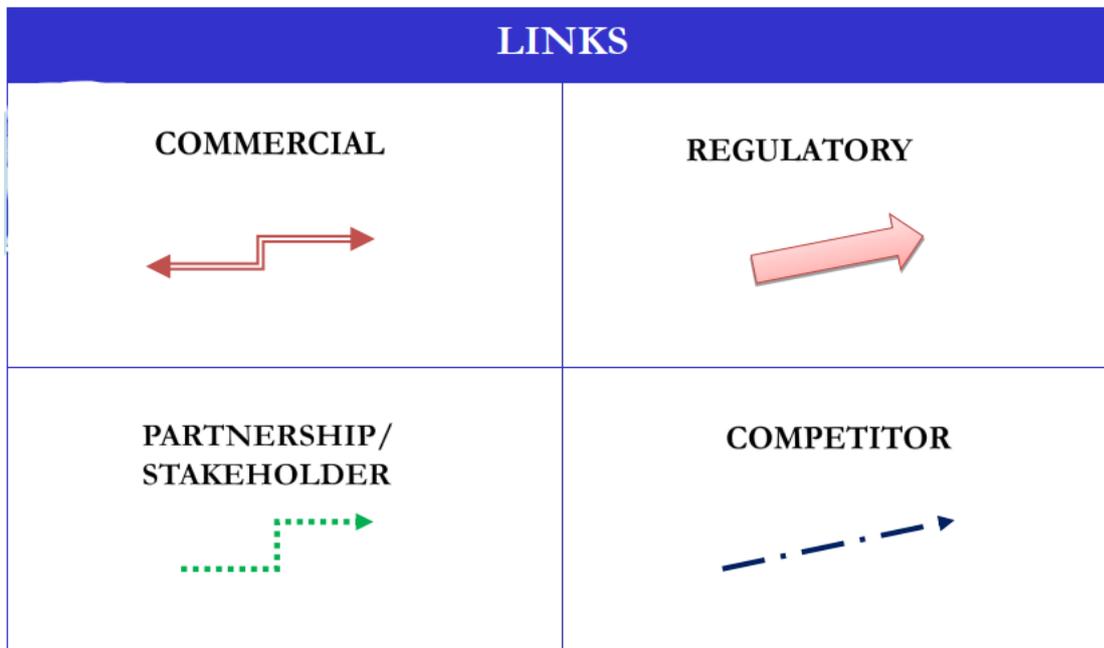


Figure 2.4 – Nature of the links, following the relationships among actors

Nevertheless, the model leaves place to further adaptations, on the base of the complexity, nature and type of the reality.

2.1.4 Map The Value

The process of value mapping is executed to track in a robust and trustable way the value creation process, involving the stakeholders with their gain creation or pain reliever. Basically, this step is divided into 3 phases:

- Creation of Actor ID
- Create and Map the value
- Compose the Value Ring

2.1.4.1 Actors ID

The actor ID is a document that reports the main information about the specific stakeholder. It Has to be fulfilled for each actor involved to map the main information about people involved in the deal. More in detail it has to report personal data that are useful for an

identification, such as name of Actor, the contact channel, the type, the description, the social-economic stratification with, the quantification of gender, age, globalization and the salary etc. For each actor is associated an actor's value ring situation, reporting the job, the pains and the gains. There are 3 levels of priority in which the value ring works: the high priority, the medium priority and the low priority. For each of these levels, in the GO phase should provide enough information to assess the priority of values for each of the actors. Once this step is completed, an identity of Actor's Persona is carried out: personas are fictional representation of stakeholders, including obviously, among the others, customers, users and competitors. These are based on real data about customer demographics and behaviors. An ideal resume of actors' ID with the value proportion should stay around 6 pages. Ideally the perfect ID has the following characteristics: explicit benefits, clearly stated and specific. Willing to pay stated. Target customer, if it is a firm, clearly stated. It should state how the value proposition is superior for a target segment. Should provide traceable and trustable data about an adequate demand and convince if acceptable returns. Any changes should be reasonable and achievable with feasible changes in current business return, achievable with feasible changes in current business system. Furthermore, the purpose of this step, is mainly to assess and attribute a value to the pain, the gain and the jobs.

2.1.4.2 Map the Value – Gain & Pain

The very first step in mapping the value is to ask ourselves the following question: where does it happen? The answer cannot be a generic one, because the value creation could belong to a single phase rather than it could occur into several different steps, and sometimes it belongs to different Supply chains (also, different industries with common end product/services). Create value deals with create a set of benefits to reach the customer and, the highest possible number of investors/ businessmen. Once defined the stakeholder characteristics in the Actor's ID, the smart firm should be able to anticipate the transaction in the market, particularly in the short/medium term. Notice that if this step is carried out properly, the product or service is going to hit a specific market segment, inside the society. Therefore, is possible to create value through the benefits that the customer is expected to own. The fit can be of 3 types: problem solution fit (or on paper), product market fit (in the market) and business model fit (in the bank).

In order to assess the value creation in a proper way in this step is mandatory to identify the customer gains, concerning in describing the outcomes and benefits that the customer wants, including the functional utility, social gains, positive emotions, cost savings or revenues increase. In some case it could be useful to state clearly how the product or service can create gain for the customer. A classification of Gains is proposed in the following list:

- Required Gains
- Expected Gains
- Desired Gains
- Unexpected Gains

Nevertheless, to provide a complete analysis, is necessary to focus also on the Customer Pains, which consist in describing anything that can annoy the customer before, during and after trying to get a job or simply prevents them from getting a job done. As for the gain creator, for pain can be useful to define or state a Pain Reliever to describe how the product can alleviate specific customer pains. A classification of Pains is proposed below:

- Undesired Outcomes/Problems
- Obstacles
- Risks (undesired potential outcomes)

2.1.4.3 Value Ring

The value ring is the last step inside the Map The Value process and it concludes the GO phase in a coherent, resolute and targeted way. The very first step is to draw a series of concentric rings, giving them a priority rule. The red color will indicate an absolute precedence with respect to the other for which, obviously, it is suggested to intervene as soon as possible. The yellow color is used for the middle priority: it provides a level in between the low and the high priority. The yellow ring deals with a close future, but not urgent as the red one. The green ring contains information that has to be considered in the future, for the long run; such information doesn't impact the actual business. Inside the ring, for each part, it is reported the decision maker or the final user that deals with the solution. Once the rings are drawn, is possible to insert inside each of them a Gain Creator and a Pain Reliever, as shown in the figure 2.5 and 2.6.

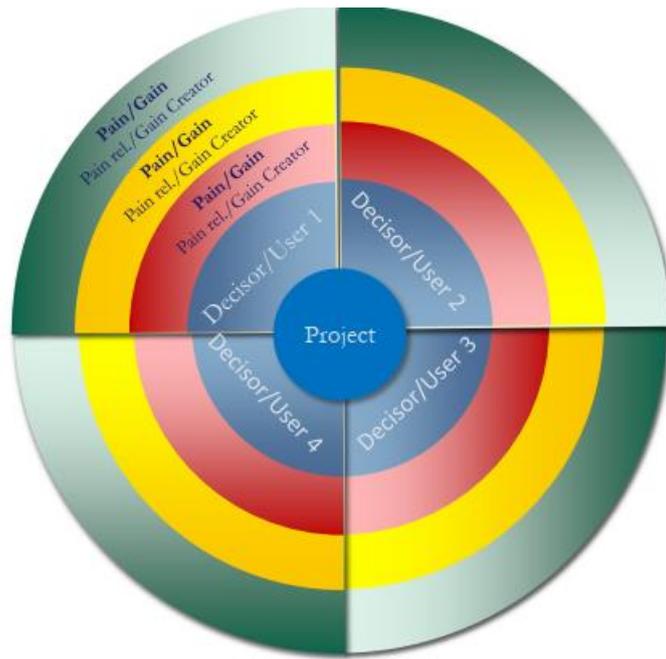


Figure 2.5 - An example of Value Ring Structure

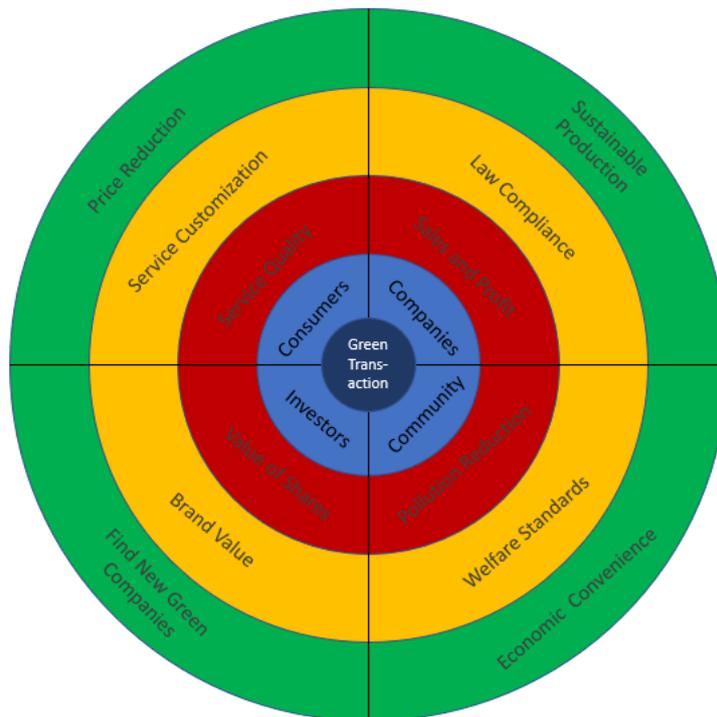


Figure 2.6 – A simplified example of a computed Value Ring on a National Green Transaction Plan

2.2 UNIFORM PHASE

The uniform phase is the second macro-step of the GUEST methodology in which the main goal is to standardize the information known from the previous phase with the scope of define a business model. Therefore, is important to focus the analysis on the company's environment from a wide perspective, from supplier to customers in order to create a knowledge base before undertaking decisions and investments. At this phase is useful follow a standard model and be able to have a deep understanding of the actual company's picture. The managerial tool used for describing and assess the firm's status is the Business Model Canvas.

2.2.1 Business Model Canvas

The Business Model Canvas is composed by 9 important buildings blocks (figure 2.7 and 2.8) that will provide descriptive information on the End-to-End company's picture.

The 9 elements are divided into 4 areas of the business, listed below:

- The Customer
- The Offer
- The infrastructure
- The Financial Solidity

Which compose the 9 blocks of business model canvas, listed below:

- Customer segments
- Value proposition
- Channels
- Customer relationships
- Revenue streams
- Key resources
- Key activities
- Key partnerships
- Cost structure

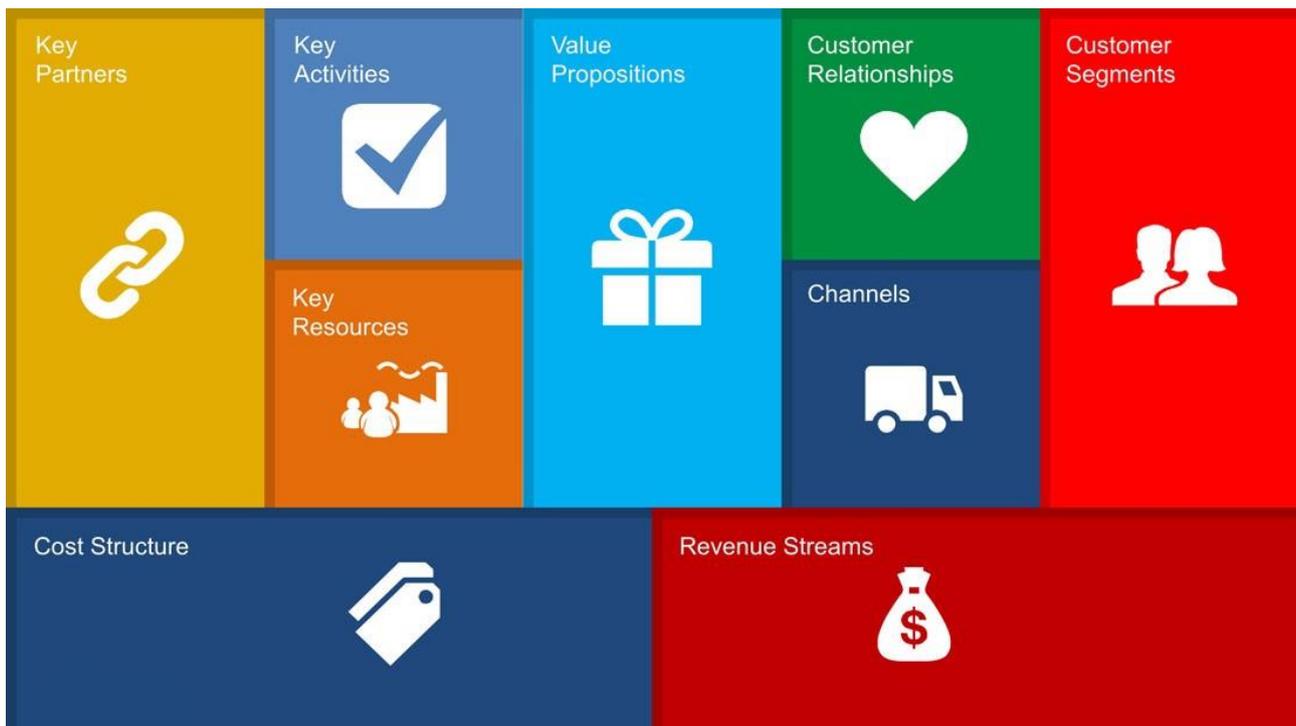


Figure 2.7 – Business Model Canvas Template

The Business Model Canvas has to be read from the center, then right and finally left. The most important part is center, where there is a focus on the value proposition: it is the core engine that the company offers to its customers.

On the right side of the BMC there figures the ideal characteristics to which a company should aspire in order to excel in its function whether, on the left side are reported the tools the company needs in order to develop its plans.

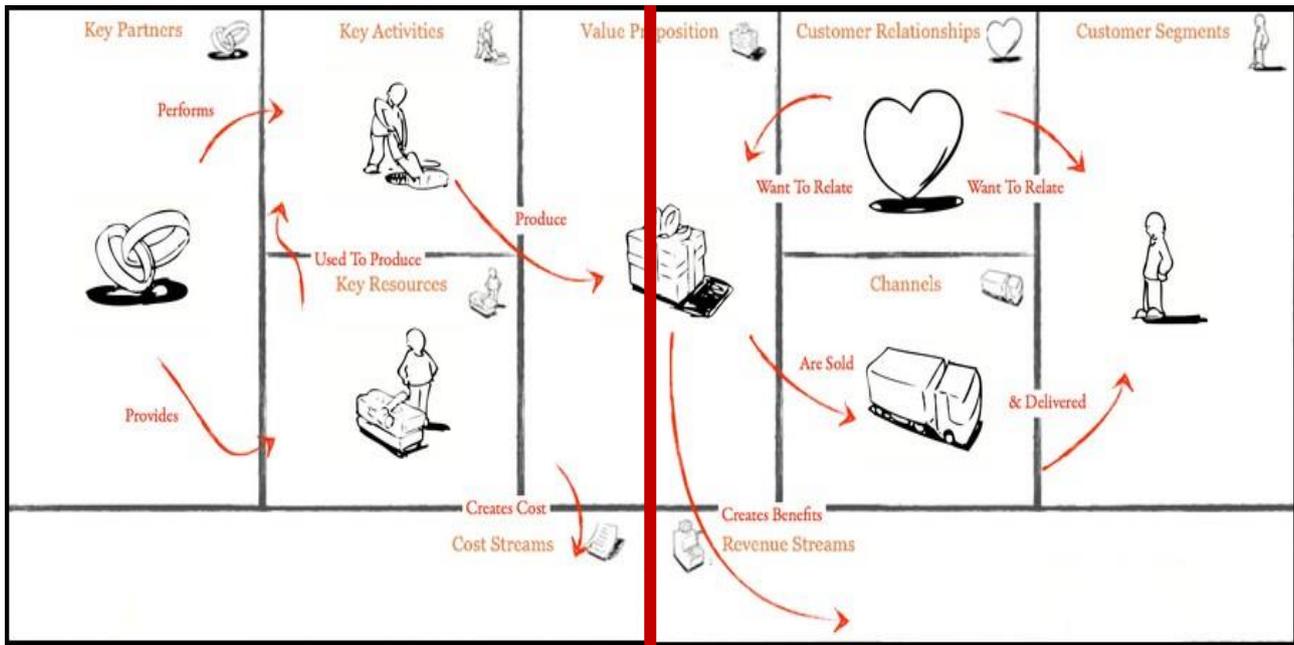
When analyzing each block of the BMC, it emerges that the block related to the customer segments defines the different groups of people or organizations that a company wants to reach and serve. The company that is producing a good or that is providing a service, satisfy needs of a potential user, and it deals with “how to develop a product or service to fulfill these”.

Hence, the company should collect data to obtain information on who are their consumer/customer, and why they would buy the product or the service.

Some examples are:

- Geographic Data
- Demographic Data
- Political Information
- Social Information

- Cultural Information



More information available for the company make easier a pinpoint on who the average customer is. Therefore, it becomes easier to optimize what you're selling and customize the product/service on the current customers' needs, or what steps you need to take to reach bigger audience. The customer block allows the company to design a bundle of products and services for specific needs of each specific customer segment.

Figure 2.8 – Business Model Canvas with Actions

2.2.1.1 Channels

The Channels block is made to understand and identify the right customers segments in simple way, by creating cluster of customers according to their behaviors that the people have in common and be sure that the company's "value propositions" reach the correct customer segments through the usage of the channels. The two most widely used channels today are the physical and the virtual channels. A possible way to identify and create customers segments are the following guide principles:

- Each customer is found through a specific distribution channel (e.g., physical store retails, websites for online purchase);
- Customers expect and require different types of relationships (e.g., the Telco companies have a customer care different for customer business or private);
- Each customer or cluster of customers have a different profitability;
- Channels are practically the way a firm share its Value Proposition to the different Customer Segments.

The Channel block represent a bridge between company and customers.

They have 5 main purposes:

- Raise customers' awareness of the company's product and services.
- Be sure that customers understand the value proposition and the brand value
- Let the customer know about the product/service
- Let the customer purchase the specific product/service
- Provide assistance through after – sales support

The channels can be owned by the company or owned by partners. For the channels owned by the company, called direct, often entails higher costs but also higher margins due to greater efficiency and a reduction of information asymmetry. Else the ownership might belong to the partners of the company and thus, entail indirect lower costs, widespread and faster diffusion of the brand.

Having the right mix of channels is equal to set up the right points of contact with customer that will use the products/ service on the market. The physical channel has been mainly preferred and used in the past for a long time. Customers can travel to a store and buy the products available in, but today the technological progress has changed the users' behaviors. In fact, almost every physical store has a virtual shop where, if the customer doesn't find the item in stock of the physical one, he will go for in the virtual where he can purchase the same product. Big realities realized that own their company's store increase the customer awareness, the value perception of the brand and represent a particular type of channel, in which the customer has an experience with the products, from different standpoints. In doing so the channel does the phase of the creation of the awareness regarding the products and brand value, while it helps the customers to evaluate them and allows them to buy the product/service. For these reasons, it becomes one of the ways through which the brand builds the relationship with the customers. In this sense, the design of channels covers a crucial role because it drives the behaviors of the users. This is true for the design in general and also, in this case, for the physical/virtual shops, where the layout and the position of the objects can have a functional and strategic meaning.

2.2.1.2 Customer Relationships

The block of Customer Relationships describes the connection established by customers and the firm and it underlines the ways in which the company:

- Acquires new customers

- Retains existing customer
- Grows in revenues

These points should be constantly analyzed as in Agile optic, during the entire lifespan of a company. When a customer is satisfied about a product or a service will provide positive feedback, expanding the community of potential users. The term “community” is referred to all the groups of customers that enjoy a company’s experience, which follow a brand and interact with the company. The company can collect information about the final user through specific surveys about rate of satisfaction and customer’s preferences about the product they want. Notice that the collection of data will help the company in getting awareness about the final needs and priorities of its customer segments and give the possibility to organize and spread various initiatives about product news/services and new value propositions that want to bring to the market. During an initiative, for instance, can the company have to possibility to co-create the process of value creation with the customers, who have the possibility to actively participate through declaring their personal needs. Customers can express their opinions and the company can obtain important information from a different perspective that might wasn’t take into consideration and, subsequently, can make choices that might modify the value proposition or the functional purpose of an object.

2.2.1.3 Customer Segments

In the Customer Segments block is declared who are the actual customers and how to engage new customers. There are several ways in which a company can behave (in accordance with its business model). At the operational level, it is important to understand what kind of relationships are more suitable for each of the customer segments identified and which types of relationships can be strategically integrated with the company’s business model.

This can allow the firm to undertake the right decisions and harmonize them with an integration of the design process. Furthermore, the companies can be in touch with their customer segments by providing differentiated assistance services, depending on the business type and from the importance that they want to attribute in this field. Assistances can be distinguished in:

- Personal Assistance: is based on a human interaction and this relationship occur when a client can contact the company directly to receive customized assistance;
- Dedicated Personal Assistance: based on a confidential and trust human interaction to promote the confidence, this relationship is designed and built by assigning to each customer a specific employee for assistance (or an employee can have a portfolio of customers to assist);

- Self-service: The company indirectly contact the customer to provide support by means of third parties. The structure of this specific kind of assistance should carefully design to not incur in a non-satisfactory level of assistance.
- Automatic Services: is an evolved form of self-service customer relationship which is prevalent in some businesses. It is the cheapest to maintain where an automated system is programmed to provide, at least, the very first assistance to the customers' questions

2.2.1.4 Key Resources

The Key Resources block includes the strategic assets that a company must have to success in its own business model, and it indicates what a firm must have to make the business model work properly. Each business has its own key resources that allows to operate and be competitive in the market, based on an asset's property or a specific know-how that bring inside. To carry out properly an activity the following type of resources can be defined:

- Physical Resources: includes tangible assets property such as buildings, production equipment, technologies, and machinery etc.
- Intellectuals Resources: includes the know-how of a company, which is stored inside the employees' expertise gained in the years of work in a specific sector, the patents, the copyrights etc.
- Human Resources: cover a fundamental role in every business model, especially in the service industry. It is important to consider which human resources are defined as strategic for the success of the business. E.g., a software company cannot exists without the programmers.
- Financial Resources: include specific financial assets and represent the financial supply necessary to provide a to set the financial disposal, security, or currency and determine the stability and health of a firm.

The analysis to do in the Resource block is to understand which resource is so strategic to create the Value Proposition for the specific Customer Segment. For instance, the vending machines of a self-service food & drink delivery system such as those in the large stations: without them would be impossible to set up the business and generate revenues. Another instance could be the designers in case of a fashion company or, another one could be the engineer's team into a building project. But, in more detail, it may be even less obvious resources, but nonetheless vital (e.g. even a website can be an essential key resource in some businesses).

2.2.1.5 Key Activities

In the Key Activities block are defined the value-added activities that must be executed to create and deliver the Value Propositions to the customers and keep the business in health. The key activities identify what the company want to be an expert at, while attribute a specialization field to the firm.

Hence this block defines which are the most important processes that the firm carry out and manage. Key activities can be of three following types:

- Productive Activities: They deal with the typical manufacturing task of production companies, for which it is mandatory to keep producing and distribute the products;
- Problem Solving Activities: They are typical of the service industry (e.g., consultancy) for which a specific problem, based on the project, requires effort in terms of time spent and resources employed to be solved
- Maintenance/development Activities: deal with platforms and networks assistances.

As for key resources, key activities also vary by the type of business model: here the natural correlation between the two blocks, where a company specialized and expertise in an industry sector execute daily the tasks thanks to the specialized personnel which, again, carry out the specific activity. A company producing furnishing, for example, will have the organization of its store spaces among the key activities; For a tech company will be crucial for have success the continued planning for improvements, updates and bugs correction; More generally, the companies should apply the principle of continuous improving of the Key Activities that will ensure the solution of problems while increasing the efficiency and effectiveness of processes.

As key resources, the Key Activities in the BMC identify the most important activities that can help in determine the success factors and identify the competitive advantage. Notice that not all the activities that belong to the daily business cycle have to be inserted in the block.

2.2.1.6 The Key Partners

This block analyzes the network of partners and essential suppliers in running the company's business model. A firm can't do everything inside, that's why the market counts a huge number of partnerships between companies. The role of partnership can hugely facilitate the goal achievement for a company. In dealing with a project or in a specific industry, it results always useful to sign an alliance and establish a trust relationship with the suppliers or other companies that are complementary to the product/service provided. Sometimes the specific knowledge of a company is not enough to execute a specific project which might require multiple and very different know-how among them. Build partnership is always better than being competitor with a firm and, finding good partners and not overdoing or produce

everything internally is a key balance in the business growth. Partners can help you providing supplies, resources, buyers, transporting and exporting at convenient tariffs. The Key Partners block also describes the network of conceiving the company as an entity that exists within a large complex system that is the market. There are essential external strategic actors out of the company that are mandatory to implement the business model and try to be competitive. The partnerships may be of different types:

- Strategic alliances between non-competing companies: it's the case of suppliers or companies that are confined to a single production chain and find useful to sign alliances with complementary producers or services provider to better execute some kind of activities;
- Strategic alliances between competitors: it's the case of companies that are on a network that provides to the end users a similar value proposition through their product. Notice that these are often forbidden by Anti-Trust authority across the world.
- Joint ventures between companies that want to launch a new product or intend to develop new business;

The final goal of these partnerships is to allow the company to respond to different needs, internal and external, which are not accounted for in its business model.

The motivation to establish a partnership can be a consequence of both companies' necessity to:

- Optimize resources and activities: in doing so, complementary tasks can be carried out
- Develop economies of scale: achieve a significant reduction of costs for both parties, maybe in acquiring from the same common supplier a greater quantity in order to ramp up the increasing discount provided
- Reduce the risk of competition: it would lead to a continuous undercut to increase the volume of sales
- Compete in a larger market: access to a specific market can be difficult if the competitors are big incumbents and you are a small enterprise but, signing a partnership may ease the access in terms of volumes or costs.
- Acquire specific resources: intended as assets and know-how to properly perform an activity
- Promote the brand: more visibility from both firms by both communities of customers and potentially acquire new customers
- Synergies creation: sometimes partnerships lead to companies' merge that entail the list mentioned above

The business model of some companies finds important business enhancements in having partners. Thanks to them, a company can satisfy a strong need of many customers. This is the case of a mobile telephone provider, that increase its subscription sales and the number of customers thanks to the partnership with a mobile phone producer. In fact, from one side, the customer wants the last mobile phone just launched in the market and, from the other, the complementary product makes possible a partnership alliance between the manufacturers of smartphones, tablets e other digital devices and the phone companies, providing a bundle with these products sold together.

2.2.1.7 Revenue Streams

Revenue streams means figuring out how the company is generated profit, that in most of the case correspond to how and how much to charge the customers. The price charging can occur in a “standard way” through direct sale, where once the product is selected is settled a price (based also on the production cost). Another way to charge customers is through subscriptions, so a time-based payment that occur periodically. Recently, the freemium category was introduced, where the product itself is free, but comes with limited features until the user decides to upgrade for money. In a business, the company needs to properly understand what is needed to get it going and how to survive. What do you need, why do you need it and how much will it cost? Below there are some of the main points that will require an ad-hoc answer, after an accurate analysis.

- How much money involve the process
- Equipment, machines and vehicles
- Employees, specialists, dedicated personnel
- Patents, trademarks (copyright)

Therefore, the variables to be considered are the price and the payment method, both critical to regulate financial flows and to make the business model work.

The prices have different mechanisms of definition decided on whether to keep it fixed or dynamic. When dealing with fixed prices, they will be established on the base of a price lists characteristics of the product and the customer segment turnover. In in dealing with dynamic prices, they will be established on the basis of negotiations among partners, the profitability for the management and the trend of the markets.

The price variable is a critical element in building a business model since it regulates the demand of customers but it’s certainly not the exclusive component in making a model profitable and sustainable.

The payment methods complete the business process design and provide to the block of the Revenue Stream some crucial information that could create problems if neglected.

Exist two main different payment structure, which generate different revenue streams:

- Lump Sum Payments: a one-time transaction payment
- Recurrent Payments: a periodic payment by instalments

While the revenues can be obtained in different ways:

- Sale of a product's ownership;
- Usage fee for a specific service;
- Membership fee to access to a service;
- Loan /Rental /Lease fees, generated when the company provides to a customer the right to use an asset for a specified amount of time. The property of the asset can, at the end of the leasing contract, be of the leasee or remain to the lessor;
- Licenses, that occur when a company decides to provide to another company rights of usage of its intellectual property or a patent;
- Brokerage commissions, for inter-mediation between parties;
- Advertising, that typically will promote the product, procuring additional sales and additional revenues

If a good and new idea is the basis from to achieve success, the correct composition of the revenue streams (and the analysis of fixed costs) allows to maintain the success by implementing a sustainable business model.

In the end, the block of revenue streams is therefore a strategic block capable to determine and measure qualitative information about the profitability of a company and its sustainability.

2.2.1.8 Cost Structure

This block identifies what are the Costs that the company must sustain to operate or that may incur if undertake a strategic decision. The block includes each type of cost that the company must pay to deliver its value proposition to the final customer. The costs to be considered can be related to:

- Resources Costs
- Marketing Costs
- Fixed Costs
- Variable Costs
- Sunk Costs
- Logistic and Transportation Costs
- Salaries Costs

- Any other relevant Cost

Bear in mind that in case of a project with a portfolio of possible solutions, a company cannot undertake them all since the budget is supposed to be limited. Here the utility to declare the cost related to each of them but, to keep the model simple and work with a limited number of variables and parameters, the model should avoid the secondary activities, non-strategic or redundant

In the design process of the BMC, the cost structure is the last element to be defined, because it is strictly correlated to the blocks of Key partners, key activities and key resources. For some activities, keeping the costs as low as possible is a priority to be able to respect the business model and have success in the market. While, for other company, it is not a priority to keep costs down, as their business model prioritizes other aspects as the social and economic value perception of the brand. An example in this field are the companies operating in the luxury segment, which deliver typically higher quality to the final customer, but sustain also higher costs. For this reason, it's possible to divide the business between:

- Business models driven by cost, where the focus is on minimizing costs. These business models provide very low costs and thanks to the fact that they typically involve relative few key resources and a lower number of key activities, is sustainable from a financial point of view.
- Business models driven by value, where the focus is on deliver premium quality of product or extra value-added or personalized quality services.

In the design of the cost structure block, it is important to ask ourselves what, between key resources and key activities, will cost more and if they are strictly necessary or exists another potential suitable alternative to deliver the company's value proposition.

2.3 EVALUATE PHASE

The Evaluate phase is the second macro-step of the GUEST methodology where is computed an action plan to solve problems and provide assessments to evaluate opportunities properly. The main strategic tools used in this phase are:

- Balanced Scorecard
- ICE-Diagram
- Marketing and Sales Funnel

2.3.1 Balanced Scorecard

The balanced scorecard is a holistic strategic management tool for a complete strategic plan at system level of the company. It has been designed by Robert Kaplan and David Norton in the nineties and when it was created it represented a sort of EPM (Enterprise Performance Management) tool, to measure and evaluate the performances of an organization. It starts with the definition of a strategy as a set of actions through strategic maps, decision to undertake that entail financial consequences. The final scope of the simulation was to understand the behaviors of the financial indicators once an action was carried out, with the aim of balancing them and secondly evaluate the result of previous actions. Therefore, the peculiarity of this model consists in the evaluation of the performances that, in the end, was carried out through indicators into a single dashboard comparing and keeping track of four different perspectives listed below:

- Economic and financial indicators
- Customer indicators
- Internal process indicators
- Learning and growth indicators

Each of these aspects is strictly linked with the others in a common strategic long run view to maximize the possibility of creating a superior economic value and, possibly, a sustainable competitive advantage with respect to competitors operating in the same business. For each of the four perspectives, it is considered:

- Objectives
- Measures
- Targets
- Initiatives

The objectives are the strategic goal that the firm want to achieve to gain success; the measures represent the parameters that could be used to measure the performances (financial and non-financial); The targets define a quantitative value that the firm want to achieve for each measure (settled to consider the performances as satisfactory); The initiatives are the strategic actions that the company will do to achieve the objectives. For each variable inserted in one of the four perspectives, targets are set in order to direct and control corporate performances. Hence, the Balanced Scorecard represent the strategic tool keep, as focus, the vision of the company as well as the strategic intent to pursue the corporate vision, intended as mission of the company.

In the GUEST Methodology it has to be computed the identification of the strategic objectives for each perspective, starting from the Business Model Canvas, where the building blocks of

BMC are translated in a strategic perspective and in operative actions to intake. More in detail, this means that for each block (e.g. Customer Segments, Customer Relationships, Channels, Key Activities, Key Resources etc) it has to be fulfilled a table containing each of the four perspectives defined previously and a qualitative or quantitative indicator that can be meaningful for the given field to achieve a goal. Example of such table are reported below:

KEY RESOURCES	
Financial Perspective	Reduce Costs
Customer Perspective	Quality Products and Services
Internal Perspective	High Employees Satisfaction Reduce Production Time Reduce TTM Productivity Optimize Assets utilization
Learning & Innovation	Develop Skills Recruit Talent Adequate R&D Activities Anticipate Customer Trends Improve Automation Talent Growth through Internal Courses Develop Knowledges

Table 2.1 – Example of Key Resources Balanced Scorecard

CUSTOMER SEGMENTS	
Financial Perspective	Growth in Revenues Broaden Revenue Sources Increase Volumes of Sales
Customer Perspective	Increase Customer Satisfaction Increase Value Perception of the brand Higher Customization of Products and Services
Internal Perspective	Understanding the Segmentation Personalization of Product and Services
Learning & Innovation	Develop Skills Recruit Talent Adequate R&D Activities Anticipate Customer Trends

Table 2.2 – Example of Customer Segments Balanced Scorecard

KEY ACTIVITIES	
Financial Perspective	Reduce Costs
Customer Perspective	Quality Products and Services
Internal Perspective	High Employees Satisfaction Reduce Production Time Reduce TTM Productivity Optimize Assets utilization

Learning & Innovation	Develop Skills Customer Trends Courses	Recruit Talent Improve Automation Develop Knowledges	Adequate R&D Activities	Anticipate Talent Growth through Internal
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Table 2.3 – Example of Key Activities Balanced Scorecard

Based on the company’s Vision and Strategic Intent, a level of priority must be assigned to each objective using colors. A high priority objective will be colored in red, a medium priority in yellow and to a low priority will be attributed the green color. Inside each table, it is possible to link the objectives between them following their relationship. A good practical procedure consists to connect the objects among them by adding arches: based on the element’s level of priority and on the number of arches incoming inside a single objective, is possible to simplify the strategic map: by doing so in each strategic map, is it possible to recap all the most meaningful information into a single summary table, where all duplicate objectives or low priority objectives have been removed. Below it can be found an example list in the identification of identification of variables and indexes for each of the four perspectives.

	VARIABLES / OBJECTIVES	INDEXES
FINANCIAL PERSPECTIVE	<i>Increase of Revenue</i>	<i>Revenues</i>
	<i>Check the Customer Profitability</i>	<i>Contribution margin / Number of customers</i>
	<i>Check of preventive maintenance effects</i>	<i>Maintenance Costs / Number of Customers</i>
	<i>Check of the effects of the payment's times reduction</i>	<i>Average Payment Time / AVG overdue</i>
CUSTOMER PERSPECTIVE	<i>Customer Satisfaction</i>	<i>Number of complains / Number of Customers Average Duration of Customer Relationships Number of recesses / Churn Rate</i>
	<i>Product quality</i>	<i>Product first Life cycle / Number of Defectives Number of returns after been sale</i>
	<i>Brand Notoriety</i>	<i>Brand Notoriety Index</i>
INTERNAL PERSPECTIVE	<i>Check of the customer acquisition goal</i>	<i>% special customer / number of customers Birthdate of special customers % of cash coverage</i>
	<i>Check of the product quality</i>	<i>Number of defectives Volumes of production wastes</i>
	<i>Check of the quality service</i>	<i>Average time for the evasion of maintenance practices</i>
	<i>Training of the salesforce / Customer information about technology of the product / service</i>	
LEARNING AND INNOVATION	<i>Check Advertising campaign</i>	
	<i>Software Development</i>	

the coordination in case of absence of prioritization, so that there couldn't be the ability to manage all the tasks simultaneously

The prioritization will be characterized by colors, where a Red row indicates an object with urgent priority, a Yellow row stands for an intermediate priority and, finally, a green row figures a low priority row.

Summarizing, the goal of the ICE diagram is to convert problems and opportunities into concrete actions to implement, that can be monitored and evaluated through the usage of KPIs, keeping the control of the company's environment in a wide sense. The advantage of this tool is that it takes into consideration both financial and non-financial factors and, subsequently, indicators that heavily impact on the company's performances, competitiveness and sustainability over time. To develop a successful diagram and take advantage of it is important to translate the company strategy into efficient tangible actions of operative management, through realistic, coherent and appropriate evaluations and actions.

Hence, to achieve these results the following actions should be properly carried out:

- Bear in mind the company's strategy, the mission and its fundamental pillars (intangible assets)
- Propose a clear and explanatory communication strategy
- Sharing the strategy with actors of interest

The objects considered in the ICE Diagram refer to the parameters of the Balanced Scorecard, as further tool to make concrete the actions that the firm wants to implement. So, the BSC defines the company strategy into efficient tangible actions of operative management, and such actions will be summarized in the ICE Diagram, and in the reduced form, defined ICE-Diagram Executive, as shown in the figure 3.1, shown below:

ICE Diagram				
Identify	Control	Evaluate		
		KPI	Res	Time
Problema x	Azione da implementare	KPI 1x KPI 2x	10K	1 w
Problema y	Azione da implementare	KPI 1x KPI 2y	50K 70k	3 w 2W
Opportunità z	Azione da implementare	KPI 1z	30K	4 w

ICE Diagram Executive				
Identify	Control	Evaluate		
		KPI	Res	Time
Problema x	Azione da implementare	KPI 1x	10K	1 w
Problema y	Azione da implementare	KPI 1x KPI 2y	50K	3 w
Cash Flow Monitoring	Cash Flow	IN/OUT Flows		Whole project

Figure 3.1 – ICE Diagram and ICE Diagram Executive

2.3.3 Market Funnel

The Market Funnel is the third tool across management / marketing competences that provide an useful contribution in the Evaluation phase. The scope of this phase is to define revenue and marketing sales costs. It is structured as follows:

- The highest part of the funnel is Market’s responsibility
- The lowest part of the funnel is Sale’s responsibility
- The middle part of the funnel has a shared responsibility between Market and Sales

Each box, from the top to the bottom, is described below:

- Prospect / Visitor: prospects are users/customers who you’ve gathered minimal data or who have signed up for a blog or a newsletter
- Lead: when you use the term “LEAD” you’re referring to a contact who has submitted a form in return for a content offer like an eBook, whitepaper etc
- Marketing Qualified Lead (MQL): Contacts who have raised their hands (metaphorically speaking) and identified themselves as more deeply engaged, sales-ready leads

- Sales Qualified Lead (SQL): SQL are MQLs that your sales team has determined to be worthy of a direct follow-up
- Opportunity: An opportunity is an SQL that a sales rep has communicated with and logged as a legitimate, potential customer
- Customer: final consumer that decides to buy and use the product / service

Moreover, identifying the revenues and the marketing costs is mandatory to define the size of a potential market. A good approach to the market funnel is to define for each step two conversion percentage, in order to have a “normal” base case, a best case and a worst case. Nevertheless, bear in mind that is required a time to conversion from the initial marketing operations on the top part of the funnel towards the reach of the final customers in the bottom ending part and that the process will require resources to be involved.

2.4 SOLVE PHASE

In the Solve phase of the GUEST methodology several information about the firm and its environment has been collected and computed so that is required an implementation of solutions proposed. By the way, could be useful in this step to ask ourselves 6 more questions in order to be sure that the whole mass of information needed to proceed for the solution is available, traceable, consistent and trustable. It should be clear, at this point, that there are information about 5Ws (Who, What, Where, When, Why) and 1H (How). The main focus in this step is therefore to represent the information into a standard way, and possibly obtain a graphical representation that allow clearness and simplicity.

The model proposed for the Solve Phase is the Solution Canvas which is a model derived from the Business Model Canvas and is extremely useful in order to give a schematic representation to deliver to an end customer, which might be inexpert, with a different background knowledge. The Solution Canvas has got the same schematic structure and interface of the Business Model Canvas, but it differs in the content of the boxes. More in detail, the boxes will contain information about Decision Maker, Users/DMs relationship, Solution Channels, Users, Decisions, Information/Resources, Constraints, Objectives and Costs. An example of Solution Canvas is provided in the figure 4.1 and 4.2, shown below:

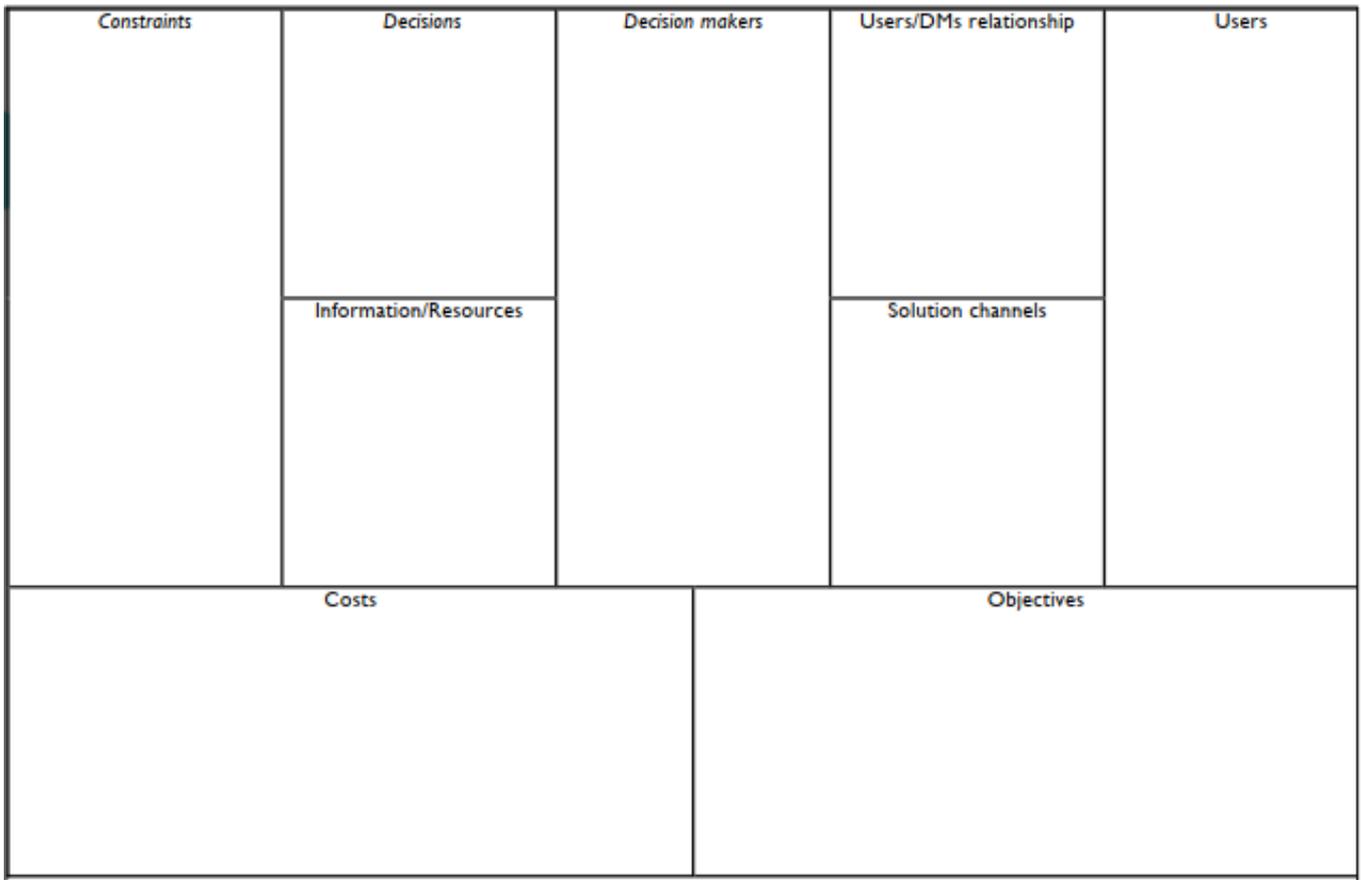


Figure 4.1 – Solution Canvas for the GUEST methodology

The scope of the solution Canvas is to try to:

- Increase and maximize the upper-right part (related to Users, User/DMs relationship, Solution channels and Decision Maker)
- Create Objectives
- Reduce and minimize the upper left part (Constraints, Decisions, Information/Resources)
- Eliminate Costs

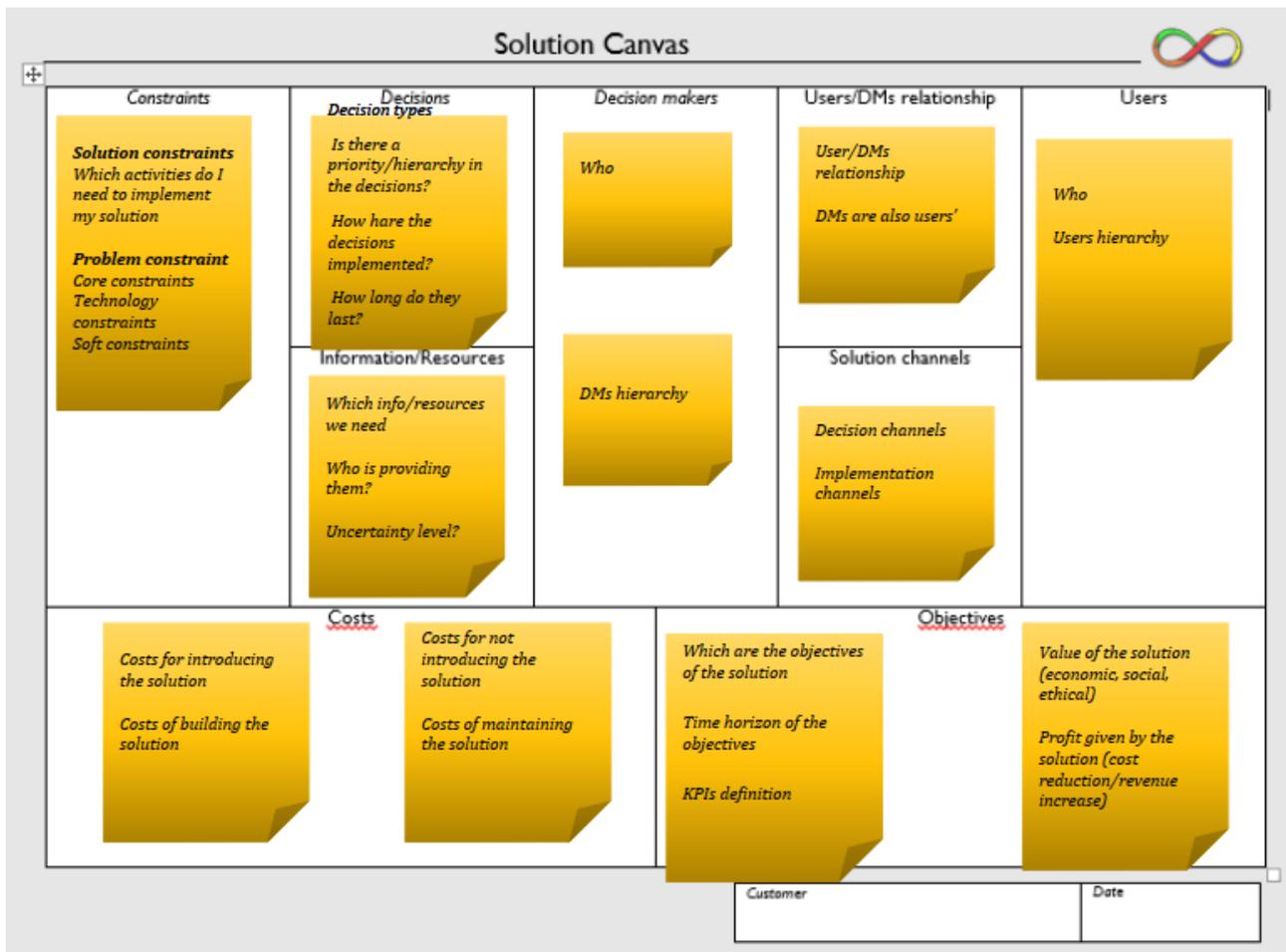


Figure 4.2 – Solution Canvas Fulfilment Example

2.4.1 Decision Makers

At the center of the Solution Canvas there is the Decision Maker, that can be represented by the CEO of the company, by the Board of Directors, an Agent or somebody who has the right to choose. Sometimes it can be created a hierarchy of actors where, in a complex context, it can occur a validation flow before the decision is confirmed. Of course, what has been just mentioned impacts the timing in the project, especially if the responsibility of the decision belongs to different organizational layers, different Business Units or different entities.

2.4.2 Users

The user represents the “final customers”. They are the beneficiary stakeholders involved in the usage of the solution. Notice that the users might not exclusively correspond to the private consumer since they could correspond to an internal employee which will be interested in the adoption of the solution proposed.

2.4.3 Users/DMs Relationship

This section is made to describe the relations that exists between the User and the Decision Maker, hence between who takes the decision and who will use the solution coming from the decision itself. Sometimes the decision makers are the ones that will use the solution: this is a preferable case, because typically inside an organization exists a sort of operative inertia that brings difficulties in adaptability of the new solution, which entails often new tasks to execute. It is also important to mention a possible conflict of interests between Users and DMs, that the new solution could bring.

2.4.4 Solution Channels

In this section are defined the channels in which different actors are informed of the change due to the solution chosen and the channels that affects the way in which the solution is implemented. The key questions that should have accurate answers are: Through which channels the solution is communicated? Through which channels the solution is implemented?

2.4.5 Objectives

The objectives are the final goal to reach through the implementation of the solution. They must be clearly stated and explicated in the previous phase of the projects and measured through KPIs identified in the Evaluate phase.

2.4.6 Decisions

This section is dedicated to the decision undertaken or that DM wants to undertake and implement. It can result useful to create a hierarchy of decisions and, for each, define a method of implementation; notice that into a hierarchy structure, it could be possible that some decisions can be delayed because of consequences of previous decisions. Here, the importance of the dependence and the responsibility of decision makers, according to their interests.

2.4.7 Information / Resources

In this block is indicated the source of the information that led to the solution chosen. Who are the providers of the information / resources needed to the solution? What is the uncertainty level of the information / resources?

2.4.8 Constraints

Meant as Solution Constraints, are the list of restrictions that has to be avoided or worked around in order to reach the objective of the solution. The constraints can have different nature, e.g., technological, competences, knowledges, financial constraints.

2.4.9 Costs

In the cost section must be declared the set-up costs to implement the solution in a End-to-End perspective. Therefore, this section should include the maintenance costs and, eventually the shut-down cost of the solution. Furthermore, it is recommendable to consider the “no cost” solution, which consists in a negative economic impact that the company would incur in not implementing the solution.

2.5 TEST PHASE

The Test phase is the last step of the methodology which has the purpose of monitoring the effects as consequences of actions that has been implemented, even at different layers. Through the monitoring of KPIs will be possible to define and keep track of the effects of the on-going business and they will ease the possibility of identifying any critical issue or any particular case not considered in the solution.

3 GUEST To-Be: Enhancement Proposals

Develop a more modern analysis can provide a stronger robust base for a better decision-making process for both actual context and future planning project purposes. During the enhancement proposal it emerged that some steps of the original GUEST methodology can be optimized since the beginning of the process, in order extend the purpose of the analysis which is reflected into a more complete information-set. In the following sections there will be listed the macro subchapters and the relative description of the enhanced GUEST steps and the related tools, proposed within an innovative and contemporary key view. Therefore, the proposal that will be discussed will regard not only an extension of existing tools already present in the original GUEST methodology but also extra additional tools to be introduced, with the scope to improve the holistic connection consistency that there is between the strategy, the risks that a goal or a set of them entail and the tools adopted.

3.1 ESG Factors

Nowadays the prerequisites of several projects are changing since they must consider not only the economical convenience and the investment feasibility to carry out a profitable business plan, but they must also care about the environmental sustainability in terms of pollution and emissions of greenhouse gasses during the whole life of the project. Hence, the choices deriving from pursuing a strategy must be compliant also to the environmental laws, with respect to the national and international legislatures. This is true from producer side, but also for consumers: they are more aware than ever about the role of sustainability and their role in protecting the environment. Consumers expect the company they interact with to be proactive in being sustainable. ESG is the acronym of Environmental, Social, and Governance and it refers to 3 central factors in the measurement of a sustainability of an investment. This approach derives from the concept of the Triple Bottom Line (known also as Persons, Planet and Profits) introduced in the '90s reporting that "companies shouldn't focus only on Profits, but also in the other 2 areas that are important as much as profits".

This concept nowadays is evolved in the ESG factors that today are the base of a Sustainable and Responsible Investment (SRI). There are advantages in the integration of environmental, social and governmental factors in the decisional process of a project's investments.

Environmental criteria analyze the way in which a firm is contributing to the environmental challenges (e.g., wastes, pollution, greenhouse gasses emission, deforestation, climate changes etc.) and its performance in such sense.

Social criteria analyze the way in which the company deals with people (e.g., human resource management, diversity and relative opportunities, working conditions, health and safety etc.).

Finally, the Governance themes consider, assess and evaluate the way in which a firm is administrated (e.g., remuneration of CEOs, corruption and abuses, fiscal practice etc.) in order to recognize inefficiencies and intervene to solve them.

The core idea in the middle of the ESG factors is simple: companies have superior probability to have success and generate excellent yield if they create value for all subjects interested, so the employees, clients, suppliers, and the society in general, included the environment. As a consequence, the ESG is focusing on the way in which a firm operate in the society and how this is influencing their actual and future performances. There are many methods to integrate ESG factors in the decisional process. Typically, the main applications are the ethic investments based on values, the ESG approach integrated, the sustainable investment and the relative impact of investing.

In the ethic investments the managers adopted a negative screening approach to generate yields ethics and morals. The negative screening today is still simple to adopt but in the past it has been used from the first mover in the sustainability field. On the contrary, today an increasing number of firms is aiming to apply the ESG factors to take opportunities and select sectors and firms on the base of their positive performances in this field. It is translated in a more integrated factor of ESG with higher probability to maximize the yields. In the impact of investing, managers push beyond in the application of ESG factors, and they aim to produce a positive impact through their investments in the future. The ESG analysis can provide extra precious information for GUEST methodology on factors that can influence in a significant way the financial parameters of a company, allowing to take more informed investments decisions.

As for other credit parameters, an enhancement of ESG profiles should imply in a lower cost of capital. On the other side, if a company presents **high ESG risks** and is not doing anything in an active way to mitigate them, is very likely that the market will perceive it and the firm will be in a worse situation in the future. Is reasonable today to believe that ESG factors enhance yields, reducing the risk of investments and creating value. A well-managed firm that cares about his employees, his customers and the environment will have superior probability to have a stronger position and overperform with respect to a firm that is not caring about ESG themes or that doesn't present these characteristics.

ESG analysis can be complex; consider ESG factors means not only evaluate the products or services provided, but also its behavior, the mission, the conduct, the production chain and other aspects tied with the management. The ESG analysis should take in consideration the future, caring not only on the most recent information on the market trends but also (and mainly) of its strategy.

It is not sufficient to base the project decisions only on historical data: it is necessary an approach more dynamic taking in consideration non-financial factors, risk and opportunities linked to ESG factors. Surveys reports that on the question “how much is important the integration of ESG factors in the project investments”, the 78% of the customers has answered that it has the same importance or it is more important than 5 years ago. Within the 2025 the millennials will represent about the 75% of the global workforce. A research of Morgan Stanley reports that with respect to the rest of the population, millennial have a twice probability to invest in companies with social and environmental objectives.

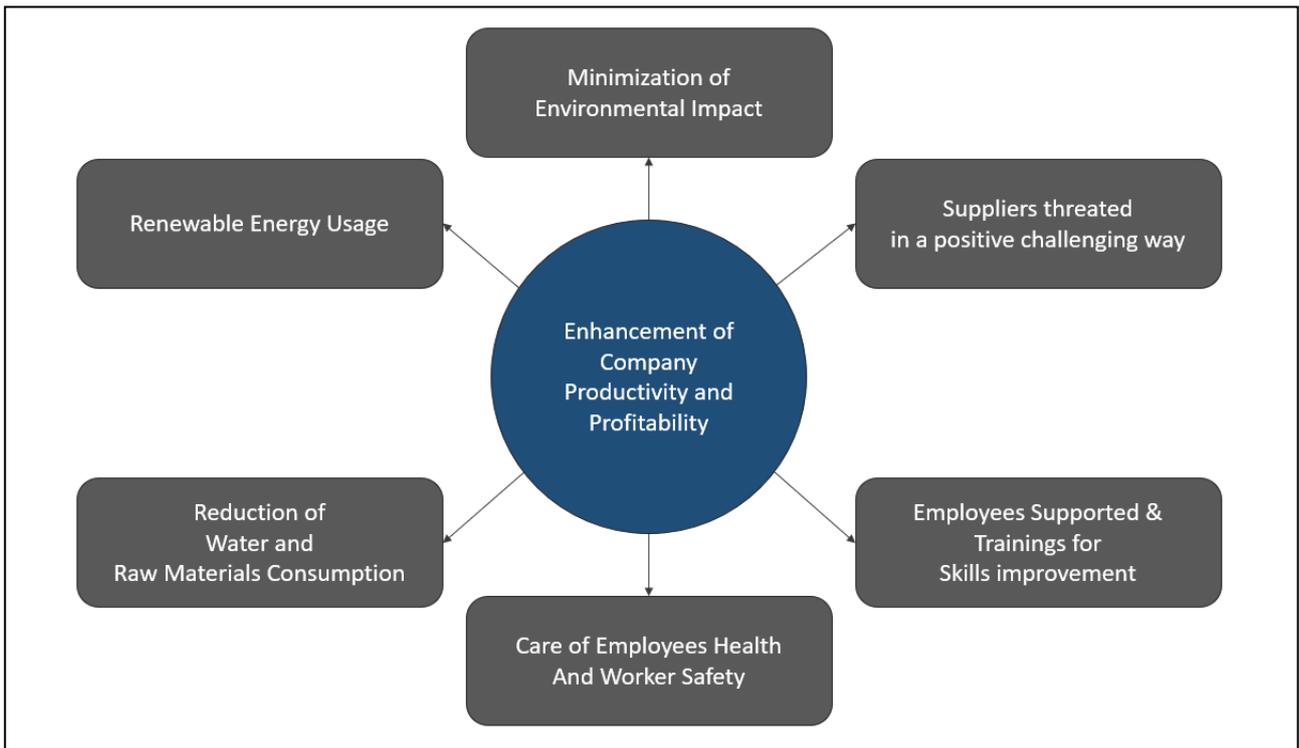


Figure 5.1: Benefits deriving from pursuing ESG strategies

3.2 GO PHASE

The as-is Go phase can be adjusted considering some extensions of the basic tools that are necessary to describe the firm environment.

Companies have to choose strategies to pursue specific goals and nowadays it can be complex than ever to gain success when acting. Decide to pursue a specific strategy will entail to undertake some decision and, in the best of cases, gain the relative payoff. Nevertheless, as other side of the coin, each firm have to face the risks associated with actions undertaken and, if not well evaluated, they can imply undesired outcomes, further extra-expenditures to repair the damage suffered, project failure or, in the worst of the cases, failure and bankruptcy for the entire company. The importance of these themes is rarely mentioned in the original GUEST methodology, and crucial factors as the risks should be deeply analyzed and managed in a dedicated part.

An effective governance for the company results to be essential to guarantee the achievement of Goals, manage internal leverages which influence the activities execution and operate within context where there isn't a total control.

The managerial activity should take into consideration everything related to the long-term value goals that the firms want to achieve. Belong to this module all the strategic assessment that the GUEST methodology is proposing (e.g., the whole GO phase and the Uniform phase). This block deals with the definition of strategy as a set of final goals. In setting the final goals, events and environment can advance some firms and not others, depending on the resource's capability and availability that the company has. It is mandatory to consider that economic cycle and technology can change and they both cover a crucial role in value creation, in particular for manufacturing industry.

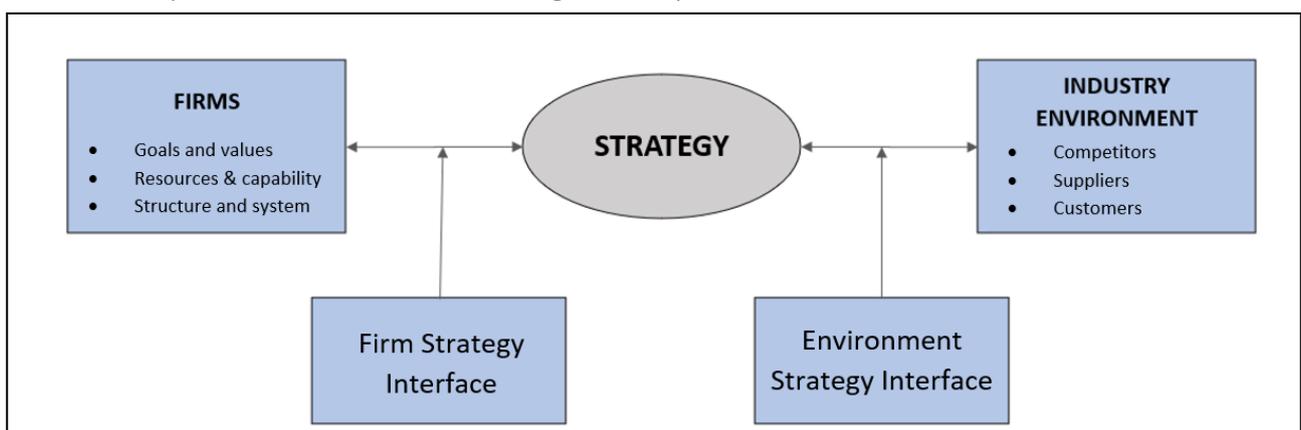


Figure 5.2: Strategy as link between the firm and it's environment

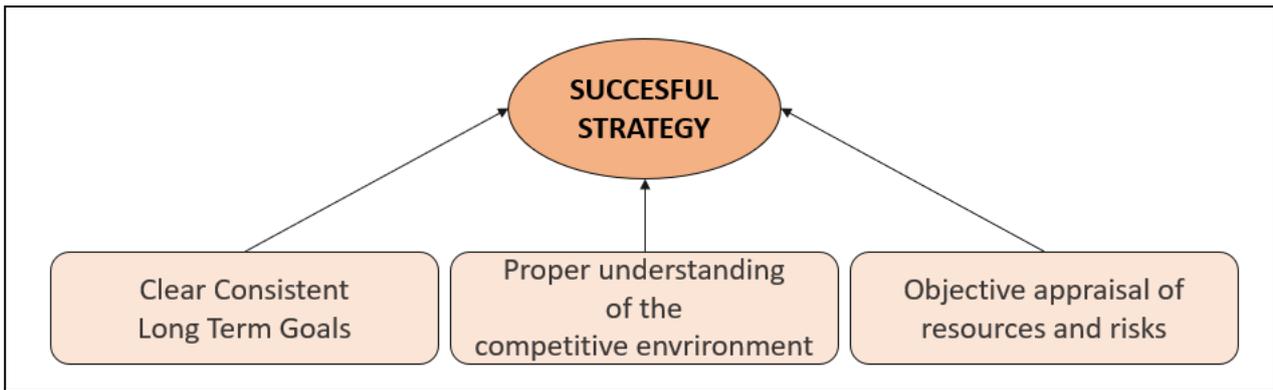


Figure 5.3: requirements of a successful strategy

It is important to understand that creating value is necessary but not sufficient to get competitive advantage. Creating value can be measured as the difference between customer willingness to pay and the supplier opportunity cost (which is the value associated with the best alternative that is not chosen). Ideally, the price for a good or a service is in between customer's benefits and producer's costs. Creating a better product or developing a better service means most of the time creating a higher willingness to pay for the customer, so that it can lead to a competitive advantage for the producer. Within the GUEST methodology (but also more in general), a firm that wants to reach the competitive advantage can try to undertake decision to pursue 3 types of competitive advantages:

- Cost Leadership - the economic value is created through the low production cost, typically due to a standardization of products and their "normal" quality. It entails lower benefits for the customers, which has a lower willingness to pay. However, the loss in benefits is outweighed in lowering the price;
- Benefit Differentiation - the product / service is sold at a higher price due to its superior quality features which typically entails superior production costs. There is often a higher supplier opportunity cost but also a higher benefit generation for customers, if compared to competitors or substitute products.
- Ambidexterity – It is the situation in which a company is capable to deliver at the same time superior benefits for the customers at lower price. Typically, is tied with the innovative redesign of the product or the service, which has superior benefits for the customer that perceives a superior economic value.

As support of theory, the tools that will be listed below will drive the strategy management at different levels.

As very first starting point it is important to introduce, in the enhanced version, the **Strategy Register**. Within it, the user has to create a list of **Goals** that he wants to achieve. The Goals can be seen as project milestones or objectives to reach at the very end of the project, and can be constantly monitored and managed. For now, we can classify *Goals* within the Strategy Register into different *categories*, namely Financial, Environmental, Social, Governance. The importance of them will be further discussed in the following sections and will drive transversally the enhancement proposal. For each goal, the strategy register will report a description of the goal, a start date, a end date, the progress, the stakeholder involved (if any) and the risks associated with the goal.

Category	Goal Name	Description	Start Date	End date	Progress	Stakeholder / Internal department Involved	Associated Risk
Financial	Goal 1	Description 1	01/01/2022	31/12/2025	Planning	R&D, Marketing	Loss in Revenues
Environmental	Goal 2	Description 2	01/01/2022	31/12/2025	In Progress	Production	Fine from Gov.
Social	Goal 3	Description 3	01/01/2022	31/12/2025	Achieved	Marketing	Reputation loss
Governance	Goal 4	Description 4	01/01/2022	31/12/2025	Not started	Management	BOD Corruption

Table 5.4: Example of Strategy Register for the GO phase

3.2.1 PESTLE Analysis

The purpose of the PESTLE analysis, as the PEST analysis, is to map out the external environment of an organization. The PESTLE analysis takes into consideration macro environmental factors that might influence the company situation.

PESTLE analysis is an extension of the original PEST analysis that takes in consideration all the areas analyzed in the PEST with the additional contributions of two areas: The Legal area and the Environmental area. These two aspects are not considered in the traditional PEST analysis: in fact, the PEST analysis analyzes, among the others, only the Political aspects, intended as stability of governments or potential changes to legislation (e.g. if the country has local national election soon and how this can change government or and policies). The Political aspects treated in both analyses are including factors about how and to what degree a government intervenes in the economy or a certain industry. Basically, all the influences that a government has on a business could be classified here: Government policy, political stability/instability, corruption, foreign trade, tax policies etc. Furthermore, the government may have a profound impact on how a nation's education system works, how infrastructure looks like and how the health sector is regulated. These are all factors that need to be considered in the assessing phase of the attractiveness of potential markets.

It is important to distinguish, within a company, the internal and the external environment: the internal environment is composed by the organizational structure, the culture, the employees, the mission, the management, the shareholders, the reward system etc. While, close surrounding the company, there are the external entities such as competitors, suppliers, distributors, customers, strategic partners etc. These external factors are in direct contact with the company itself and sometimes are called the task environment. The PESTLE, as the PEST analysis, is not looking at the task environment. PESTLE looks at a higher level of macro environment which can have a massive impact on a company

The Legal factors considered only in the PESTLE analysis, instead, are contributions that may have some overlap with political factors, but they include more specific laws such as discrimination laws, antitrust laws, employment laws, consumer protection laws, copyright/patents laws and safety laws. Companies need to know what is and what is not legal in order to operate successfully and rightfully, especially in a foreign country. Each country has its own set of rules and regulations and for companies that trade globally, and it could be tricky to incur in undesired outcomes. In addition, management always wants to be aware of potential changes in legislation and the impact that it may have on the business on the future. So, the recommendation is to be aware of both political and legal potential changes and hence have a legal advisor or an attorney to work on this specific sector.

Environmental factors have come to the forefront only relatively recently and they have become day by day much important due to the increasing scarcity of some raw materials, pollution targets and carbon footprint targets imposed by National Governments pressure from Non-Governmental Organization. It is important to mention that the term environmental is used to indicate all external factors combined, used to indicate ecological aspects such as weather, climate, environmental offsets, and climate change.

Growing a business in the awareness of the potential impacts of climate changes, the environmental sustainability, the production scraps and emissions are affecting how companies operate and what kind of products they offer. This has led to many companies getting more and more involved in corporate social responsibility and sustainability of their production activity.

All the factors described in the PESTLE analysis can give a good overview of the general environment: the factors that are most important for a specific business vary and they can depend on the geographic location and on the kind of industry in which a firm operates (e.g., the Environmental aspects are more important into an automotive industry).

A further advice to properly apply the PESTLE analysis within the GUEST enhancement proposal consists in the use of a weighted average score to attribute, during the decision making, not only a qualitative evaluation but also a quantitative dimension. Let's make an example and suppose a European company that wants to enter in the South American market, but the company doesn't know which country to enter first. What is recommended is to select a few PESTLE factors that are most significant for the company's business. Imagine considering factors like the future economic growth, the Grade of Corruption and how intellectual property is protected. The weighted average consists in:

- Assign a relative importance (as a percentage) to each one of the factors;
- Assign a grade for each factor (from 1 to 10);
- By multiplying the relative importance times the grade, obtain a weighted average for each factor;
- By summing the weighted averages of each factor, we can have a total final score for each single country;

The procedure just mentioned is described in the table below for a single country:

Factor Name	Relative Importance	Grade of Importance	Weighted Average Score
Future Economic Growth	60%	6	3,6

Grade of Corruption	15%	2	0,3
Patents Protections	25%	2	0,5
Total Country 1	100%	10	4,4

Table 5.1: Weighted Average Calculation for PESTLE analysis

3.2.2 SWOT Analysis

SWOT stands for strengths, weaknesses, opportunities, and threats and allows to achieve a further strategic vision of a project or of a firm and its environment. This tool can help the decision-making process, especially if it is combined with the PESTLE analysis. When computing the SWOT analysis, the executor should keep in mind some base principles that will easily-drive the computation and that will result in a more complete environment overview. While computing, keep in mind to mention for each category, at first the most relevant object and then the less important, in order to obtain a classification based on the grade of importance. Below is provided a description of each SWOT category, in order to guide the computation in the relative part of GUEST enhanced proposal:

- **STRENGTHS:** deal with everything that a company is currently doing well. Most of the times the actors involved within a project tend to dissociate the excellence of a company from their internal resources. If a company is doing well it is because of the know-how of the internal resources in the day-by-day job. The specialization of a company entails the specialization of resources, that might be unique and at the end, can distinguish a company from other competitors. The strength can be the motivation and the commitment of the staff or the positive work environment and the synergy that exists among employees, the set of machinery to perform a better manufacturing process with respect to competitors etc. Hence the strengths are integral part of the business: a real strength factor is often recognized among competitors and provide a clear advantage to the owner.
- **WEAKNESSES:** deal with areas of the business in which the company can improve. Namely, the weaknesses are the opposite of the strengths and sometimes they can matter about the number of resources in a given area, the degree of specialization of them, the internal procedures or the equipment system that might be not completely appropriate to execute a given task. Weaknesses are inherent characteristics of the business, so they have to be identified inside the areas that actually are not performing well or that are most likely that will have problems.

- **OPPORTUNITY:** The opportunities are the result of the actual strengths and weaknesses jointly with any type of external initiative that can bring advantage to the company. The Opportunities consider all the trends that are emerging or will emerge in the future as a chance to be exploit. In this step they key concept is to understand which resources are needed to improve. The opportunities deal with what kind of advantages might arise from changes in Governmental Policy, Economic trends, Social patterns, Technological development, Legal constraints, and Environmental factors. Hence it can result useful to combine the SWOT analysis with the PESTLE analysis, to have a clear strategy to drive the decision process.
- **TREATS:** deals with “what obstacles the company actually faces” and “what are the problems that might occur in the future”. Treats are risks which typically are not under control. In this part it is important to detail, during the computation phase, both categories of risks under control and out of control. These risks will be then analyzed deeply in the risk management part of the Enhancement Proposal of the GUEST methodology.

3.2.3 Porter’s Five Forces

The Porter’s Five Forces analysis present in the actual As-Is of the original GUEST methodology can be kept also for the enhancement proposal without any modification.

3.2.4 Multiple Social Business Network:

As already mentioned in the chapter 2.1.3, the Social Business Network has the purpose of tracking in a visual way the flows and connections that exists in the firm’s external environment. The network models are considered as structural environments description of what can provide opportunities or constraints for actors’ actions. For GUEST enhancement proposal it is important to underline that in some case projects can be extremely complex to be represented in a single Social Business Network. Let’s suppose a project for which it is forecasted a duration several years and which involves several producers and companies that must deliver different specific products/services at different times or within specific project milestones, different customers that expect to receive the final product/service at different projects steps, authorities of different nature (banks, local authorities, national authorities etc.). For a project like the one just described it is limited to think to represent a such complex situation in a single layer. Hence, the right choice can be the one to decompose the schematization of the structure environment in more than one sheet based on the timeframe, in order to clear identify the stakeholders and their relationships for each different period. The suggestion is to draw more than one Social Business Network scheme,

based on the project's different instead of having a single scheme for the entire macro-project.

Each scheme should detail the different steps of the project (e.g., provide different sheets / schemes that should describe the environment and actors involved within a period or within a limited number project's tasks). The As-Is structure of the Social Business Network can be maintained in terms of entities involved, connection link proposed, and icon adopted.

A minor further enhancement for the Multiple Social Business Network (but also for Social Business Network) consists in providing a growing numeration to each link, in such a way to order the whole project process in a temporary way when possible. Insert a time sequence to numerate the events will guarantee a more readability from stakeholders and will help to keep track of the project phases during its entire life.

Hence, for the GUEST enhancement proposal, the final choice of drawing or not the Single or the Multiple Social Business Network should belong to the final executor of the methodology based on the nature, complexity and length of the project.

3.2.5 Map The Value

In the enhanced proposal of the GUEST methodology, the Map The Value phase will keep the same purposes of the As-Is version, with a focus on the stakeholders in the Gain & Pain section.

It will be reordered in the following way:

- Creation of Actor ID
- Creation of Value Ring
- Gain & Pain

3.2.5.1 Actors ID

In the original methodology, the Actor ID is a document that reports the main information about the specific stakeholder and allows the creation Personas, fictional representation of them. The Competitor ID and the Actors ID will contain, among various information, the Value Ring for specific competitor, partner, customer, stakeholder, authority or market segment reporting high/medium/low priority job/pain/gain. In the enhancement proposal of the GUEST methodology, it is suggested to carefully compute this phase because it will be the base of the *Stakeholder Register*, detailed in the paragraph 3.2.5.3.

3.2.5.2 Value Ring

The As-Is Value Ring that has been introduced in the original GUEST methodology can be kept as output and graphical representation of Actors ID part also for the enhancement proposal without any modification.

3.2.5.3 Gain & Pain

The current As-Is for the Gain & Pain phase is highly detailed and results coherent within the GUEST context. There is only a missing aspect in the original version which will be functional in the next steps of the enhanced GUEST proposal and will provide a direct link with the overall phases: the creation of a **Stakeholder Register**. The stakeholder register is a document based on the original value ring that has to be computed after it and which reports, for each *Stakeholder Category*, several additional information such as the stakeholder’s name, the risks associated with each stakeholder, the impact on business, level of control, level of dependency, responsibility, stakeholder tensions and concerns. As for the Value Ring, in the stakeholder register will be used different colors to distinguish and prioritize 3 levels detailed below:

- Red: indicates a high priority important object;
- Yellow: indicates a middle priority object;
- Green: indicates a low priority object;

To perform a complete analysis, it is important to investigate among the 4 Categories (Financial, Environmental, Social and eventually Governance) for each stakeholder.

Category	Stakeholder Name	Associated Risk	Level of Control	Level of Dependency	Responsibility	Stakeholder Tensions and Concerns	Impact on Business
Financial	Stakeholder 1	Fluctuating price of supply	Medium	High	High	High	High
Environmental	Stakeholder 2	High CO2 emissions due to delivery	High	Medium	Low	Medium	Low
Social	Stakeholder 3	Negative influence on market	Low	Medium	High	High	Medium
Governance	Stakeholder 4	Conflict of interest of BOD	Medium	Medium	Medium	Low	Medium

Table 5.2: Example of a Stakeholder Register for the GUEST enhancement proposal

An additional output of this phase is a recap table containing the Stakeholders’ Concerns and the Relative impact on the business, which represent the most significant information sources about the stakeholders in general. The combination of information coming from a stakeholder issue, saw as Stakeholder Concerns and the level of Impact on business, will

constitute a matrix where each box has different colors. In the matrix, as for the Stakeholder Register, can be distinguished colors on the base of the stakeholder’s issue priority.

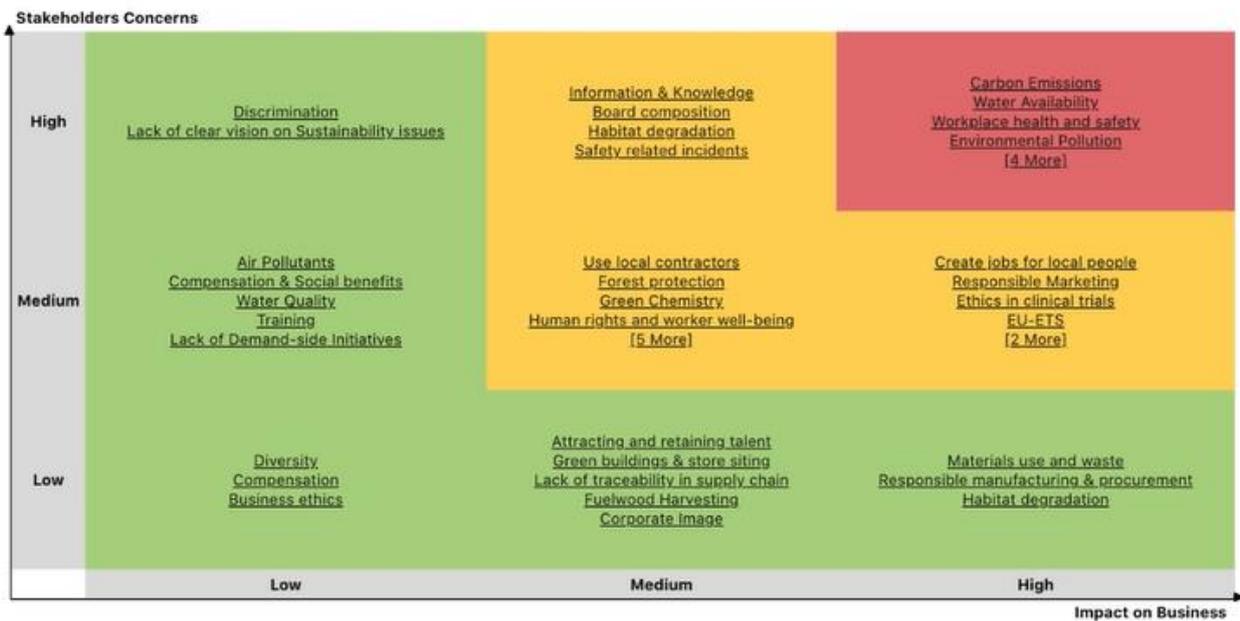


Figure 5.3: Output of stakeholder register - Recap table

The combination of the Actors ID, Value Ring, Stakeholder register and the relative output table will ensure the right management of each stakeholder and will maximize the overall satisfaction if carried out properly.

3.3 UNIFORM PHASE

The proposal for the enhancement of the Uniform phase deals with the Triple Layered Business Model Canvas, for which a detailed description will be provided in the following paragraphs.

3.3.1 Triple Layered Business Model Canvas

The Triple Layered Business Model Canvas (Joyce & Paquin, 2016) is an innovative sustainable-oriented managerial tool that provide a visual representation of a business model and can suggest insights to innovate the existing peculiarity of a firm's area. The difference between with the BMC adopted in the original GUEST methodology consists in in adding two additional layers: a *Social Layer*, based on stakeholder perspective, and an *Environmental Layer*, based on the product lifecycle perspective. It is considered a more complete tool with respect to the original BMC by the literature because the Triple Layered Business Model Canvas (TLBMC) better describes how company create values of different nature, in an *ESG* optic. The TLBMC can be applied to each business to support developing and communicating a more holistic and integrated view of a business models. It follows a triple bottom line approach to organizational sustainability, indicating and declaring directly economic, environmental, and social value creation as core to a company's business model. The TLBMC allows the bridge between the business model innovation and sustainable business model development: it is a support tool for companies in seeking competitive sustainability-oriented change to address the challenges facing today. The TLBMC is useful to go beyond barriers to sustainability – oriented change within organizations (2013, Lozano) by creating a conceptual re-design of their actual business model and suggesting possible innovations. University courses, organizational workshops and private consulting propose the TLBMC to display and explain the actual company business model, helping to understand better the relationships between organization's current actions and its economic, environmental, and social impacts. In the TLBMC each layer provides a horizontal coherence within itself and a vertical coherence or more holistic perspective on value creation. It can be used also as a validation tool to outweigh benefits and costs of a business model from a wider perspective that considers also environmental factor and social characteristics. Furthermore, it has been applied, for example, to explore and address reasonable impacts of possible stakeholder consequences of specific changes. Below there will be provided a description of the two additional layers, to be considered as an extension of the traditional financial BMC which remains included even if not mentioned (because already discussed in the chapter 2.2.1).

3.3.1.1 Environmental Layer

The environmental layer of the TLBMC is to evaluate how the company creates superior environmental benefits than environmental impacts. This can allow the users to gain insights for where the environmental impacts can be tracked with different metrics. Below is provided a description of the components of the environmental layer.

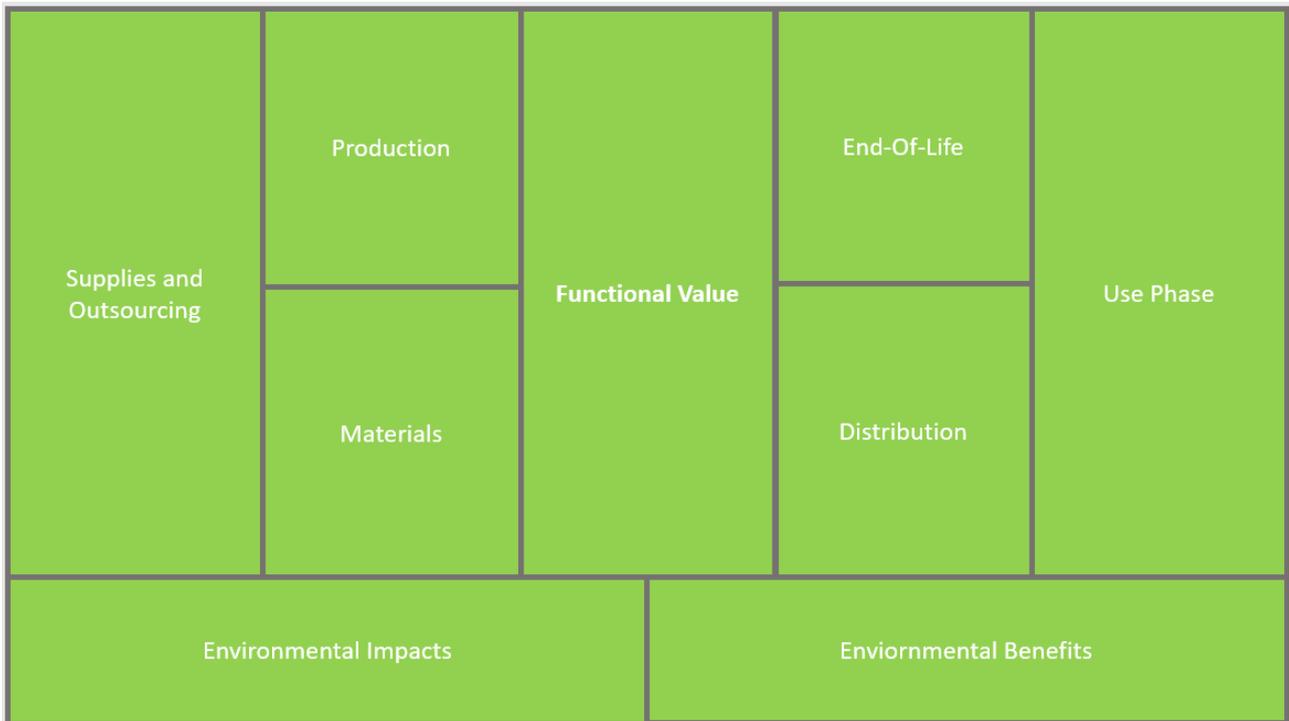


Figure 5.4 – Layout of Environmental Layer TLBMC

3.3.1.1.1 *Functional Value*

In this block is described the key output of a product / service by the company analyzed. This section is useful to, as first, clarify what is examined in the environmental layer, and second, to serve as a baseline for exploring the impacts of alternative potential business models. The functional value is like the functional unit in a lifecycle assessment, which is a quantitative description of either the performance or the needs fulfilled in the investigated product system. The main difference among a lifecycle assessment's functional unit and the functional value can be seen as one of usage (e.g., for a company that produces coffee capsules, the functional unit can be the pod itself, while the functional value is the total of these pods consumed by customers in a given timeframe such as a month). So, the functional value is an idea of what are the offerings in terms of physical quantities.

3.3.1.1.2 *Materials*

The materials block is the environmental extension of the Key Resources block in the original BMC: material section considers the physical stocks used to interpret the Functional Value. Each manufacturing firm buy, as materials, different types, and high amounts of raw materials, whereas services organizations typically require, as materials, infrastructures and IT services support. Furthermore, service companies need material consumption in the form of assets as vehicles, computers and office buildings. It is strongly recommended to identify organization's key materials and their environmental impact, rather than insert in this section the totality of the materials that deals with the business.

3.3.1.1.3 *Production*

The production section deals with what type of environmental impact is generated from the actions undertaken by a company to create value. For this reason, it replaces the Key Activities section of the traditional BMC. As for Materials, it is not necessary to include each type of production activities but only the most relevant for the specific business. For a manufacturing industry, there will be some production step which needs a superior consideration due to its higher negative environmental impact with respect to the other. While, for a service industry, this section can include the transport of people, transport of logistics, hosting service points and the usage of office spaces, or running an IT infrastructure.

3.3.1.1.4 *Supplies and Outsourcing*

Supplies and Outsourcing section have to include all the non-primary objects that are necessary for carrying out the business. So, it has to include each kind of different materials and production activities required for the functional value but that don't represent a "core" to the company. As for the traditional Business Model Canvas, the distinction is among Core actions that are unique for the company and useful to maintain the competitive advantage and Non-Core actions that are necessary but not unique. The outsourcing is typically done for such activities that doesn't correspond to the core competencies that characterize business. In an environmental optic examples can be water or energy that could come from in house sources, or they can be supplied by other firms.

3.3.1.1.5 *Distribution*

Like the traditional Business Model Canvas, distribution deals with the transportation of goods. For both manufacturing companies and services firms, this section is dedicated to the means on which the companies give access to its functional value and describes how it happens. In the environmental optic, it is considering the transportation methods, distances and weights of the goods that impact on the consumption (and hence on the emissions) of the specific means of transport adopted. Furthermore, this section can also consider the impact of the packaging if it has a critical role in terms of environmental impact.

3.3.1.1.6 Use – Phase

The Use Phase is a part of a product lifecycle and it considers the impact of the user's take part in the firm's functional value, or core product/service through the usage. It can also consider the maintenance and the repairing impact of a product and should include several usage hypotheses on the users' material resource and energy requirements needed for the usage. For most of electronic goods, the use phase impacts when charging device and/or when using an infrastructure needed to support the network of users. In some cases, the distinction between production and use phase cannot be so clear, especially for companies that offer co-creation of services and product sharing: in these cases, an ad-hoc analysis should be carefully carried out in order to reasonably distinguish the two phases.

3.3.1.1.7 End – of – Life

Once the consumer decides to end the usage of the product / service, it starts the End-Of-Life Phase. The End – Of – Life phase is considered also in the final part of a Life Cycle Assessment and there exists several EOL types, such as combustion for heat recovery, recycle re-engineer, re-use, and the disposal to the landfill. In the environmental layer of the TLBMC, the EOL section supports the managing of the impact through extending the firm's responsibility beyond the in-door production and distribution steps. It can be seen as an opportunity for companies to try to imagine and innovate parts of new business models.

3.3.1.1.8 Environmental Impacts

The environmental impacts section takes under examination the main negative ecological outputs tied to the company actions and that firm's decision entail. The correspondent area of original BMC has the scope to monitor the financial costs, while this section in the Environmental Layer of the TLBMC takes in consideration the organization's ecological costs. As for a Lifecycle assessment, there are several performances indicators that can be considered such as the CO2 emissions, the natural resources depletion, energy consumptions, water usage and emissions. As with exploring an organization's financial costs, this provides an opportunity to explore where, in the organization's actions, are its biggest environmental impacts.

3.3.1.1.9 Environmental Benefits

The Environmental benefits section deals with the positive effects that are generated beyond the financial perspective. An environmental impact reduction or a regenerative ecological value can be included in this part. This section is useful for a company to deep dive and explore the positive outputs of the business, and can provide insights to innovative business solutions, products or services which can produce further positive externalities for the environment.

3.3.1.2 Social Layer

The Social Layer is considered in the TLBMC to ensure to own all the necessary building layers needed to create, capture, and deliver the promised value. The focus is on local communities and goes beyond the stakeholders and partners involvement. The general purpose is to try to figure out how the society is involved in the business process, keeping cultural factors in mind while the company is creating and enhancing awareness on the end user perspective.

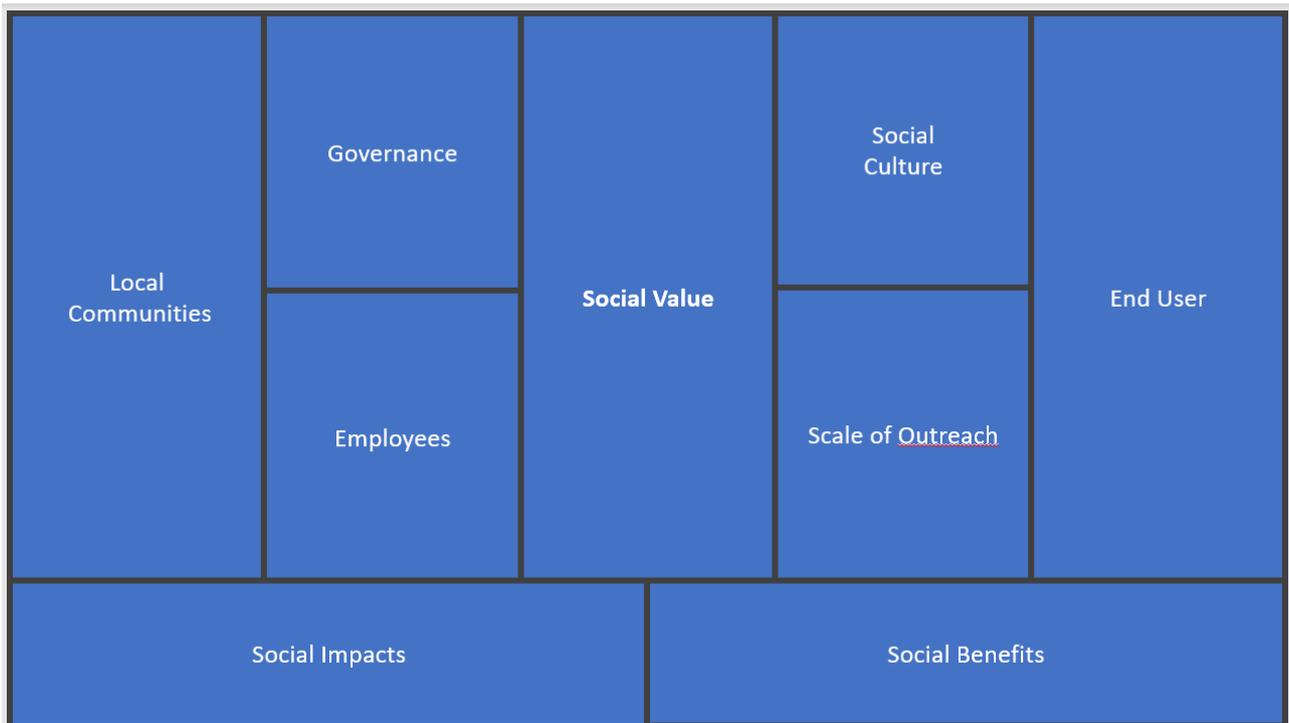


Figure 5.5 – Layout of Social Layer TLBMC

3.3.1.2.1 *Social Value*

In the middle of the Social Layer there is the Social Value block, which obviously covers a high importance role within this layer. It involves the company mission, and it can deal with how the society perceives the product and the service delivered. It can be addressed to the end customers and/or to the partners. Developing long term value from mutually beneficial relationships can belong to this purpose. Some firms are more environmental and sustainability oriented, and for them the creation of social value is typically more explicit if compared to profit-oriented companies. Nevertheless, even for “purely financial” companies the value creation is very likely going beyond the financial return, but it is not explicitly stated. This section is hence dedicated to insert the initiatives created where the company investment social-oriented, can impacts productivity, efficiency and costs: the social value is strictly related to value creation.

3.3.1.2.2 *Employees*

Very often we tend to dissociate the company from its employees: the idea that excellent companies are outperforming because of their well-known name in the market often prevails the idea that day by day, excellent employees are executing their job. Companies are made by person, and if an organization is performing well is because its internal capability, represented by the high specialization degree of the employees. This section is made to report the role of employees as a core organizational stakeholder. Several considerations can be included in this section such as number and type of employees, demographics data such as differentiation of gender, ethnicity, culture, education, remuneration etc. This block has also the purpose to discuss how internal courses, training, additional employee’s-oriented programs contribute to firm’s long term value creation.

3.3.1.2.3 *Governance*

The block of Governance has the purpose to analyze the internal organizational structure, the decision-making policies, and the information flows within a company. The decentralization of decision-making structure has a crucial role: some companies decide to decentralize to increase the responses in answering to the needs as soon as possible and to empower employees and motivate them (e.g., in lean manufacturing each employee is less specialized but high commitment). This section can also consider the grouping within a business model, which can follow a pure functional structure, a pure divisional structure or a mix of them.

3.3.1.2.4 *Communities*

The Communities part is made to identify and describe the importance of the social relationships built with the suppliers and economic relationships with partners. When interacting with communities, an organization's success can be greatly influenced through developing and maintaining mutually beneficial relationships during the time. Furthermore, companies that own different facilities in different countries should distinguish different stakeholder with different culture and needs to focus on, instead to consider implicitly as more important only the country in which they are headquartered.

3.3.1.2.5 *Societal Culture*

The Societal Culture part is made to identify possible impact of a firm on society as a whole and it is based on the concept of sustainable value and how through its action the firm can generate positive influence on the surrounding environment and on the society in general (Laszlo,2008). The Societal Culture section should include any entity (even external to the company) that has social influence through daily operations and that, of course, is somehow coherently touching the company. The category of NGOs could be considered in this section.

3.3.1.2.6 *Scale of Outreach*

The Scale of Outreach widely describes the relationships that a company is building over time with its stakeholders during the firm's life, potentially including the possibility to develop integrative relationships in the long run and the outreach of the impact geographically. It might include the firm's impact on how and whether it addresses societal differences such as locally interpreting ethical and cultural actions across different cultures and countries, include a range of actions deep and diversified. Example factors to be included for a growing company can be: number of different countries reached with number of stores and the relative same or different purpose, social programs such as language education, micro credit programs for the supply chain etc.

3.3.1.2.7 *End - User*

The end user is the final consumer of the value proposition, is the customer who reach the final micro – social value. The company should seek to provide value for the customers by trying to pursue their needs, therefore this space's purpose is to attribute the requirements of the consumers, trying to enhance the quality of its life through the product/service. In some case the End-User is not the same of Customer Segment mentioned in the economic layer, which aims to identify and classify cluster of customers.

3.3.1.2.8 *Social Impacts*

This section is made to identify and attribute the social costs of a company and it is complementary extension of the financial costs and environmental impacts, respectively for the economic layer and environmental layer. There isn't yet a consensus on what social impacts to consider, nor how to quantify them. The more known and used metrics in this field can be measure of the fair competition, the respect of patents and intellectual property rights, the number of working hours, cultural heritage, health and safety, community engagement etc. What type of indicators are more adapt for the company depends by the nature of the social and business context and can vary from each specific case.

3.3.1.2.9 *Social Benefits*

This last part of the Social Layer deals with the positive social effects generated by the company's behaviors. If the firm decides to undertake strategic decisions with social throwback or explicit positive social consequences, the effects have to be inserted here. Social benefits, as for social costs, can use metrics that can vary from case by case.

3.4 EVALUATE PHASE

The Evaluate phase of the new GUEST methodology will present some modification that are necessary to carry out a superior quality analysis. This section will always deal with providing assessments to evaluate opportunities in an optic of realism but, in order to perform a concrete estimation, the risk management part will be added in the paragraph 3.4.4. Furthermore, to not overload the computation from executor side, the balanced scorecard part will be modified.

The main strategic tools used in this phase are:

- Balanced Scorecard
- ICE-Diagram
- Marketing and Sales Funnel
- Risk Management

3.4.1 Balanced Scorecard

In the original GUEST methodology, the Balanced Scorecard section was computed starting from the traditional Business Model Canvas where, each building block (e.g. Customer Relationships, Key Resources, Key Activities etc.) had to fulfill its specific table on four perspectives (financial, customer, internal and innovation perspectives).

The starting point of the Balanced Scorecard for the new GUEST methodology proposal is the Triple Layer Business Model Canvas. As previously mentioned, in order to not overload the computation from executor side, it is chosen alternative way with respect to the original GUEST. It is due to the difference in the number layers between the original BMC and the TLBMC: it could be a time-consuming task to carry out if, for each building block of each of the 3 layers, it should be created a dedicated table reporting the four perspectives.

For this reason, the idea is to simplify the process and create, for each of the 3 layers, a dedicated table which contains the main information from a financial, customer, internal and innovation perspectives, as show in the tables below:

Financial Layer	
Financial Perspective	Reduce Costs, Increase Revenues Increase EBITA, Correct usage of financial leverages
Customer Perspective	Reach a superior quality product through changing supplier for components bought Increase Value Perception of the brand
Internal Perspective	Reduce Production Time. Issues' collection to enhance effectiveness Bonuses rewards if milestone is achieved in time and within budget
Learning & Innovation	Develop Skills, Recruit Talent, Adequate R&D Activities, Anticipate Customer Trends, Improve Automation, Develop Knowledges with courses

Table 6.1: example of Financial Layer as input of Balanced Scorecard

Environmental Layer	
Financial Perspective	Reach public European investments funds for being compliant with CO2 emissions Being eligible from the national government for tax relief
Customer Perspective	Increase Customer Satisfaction for EOL of the product and Recycling procedures Being known in the market to be environmentally friendly and sustainable
Internal Perspective	Develop a sustainable manufacturing system with lowest possible environmental impact
Learning & Innovation	Develop "sustainable skills" and environmentally friendly procedures / tasks from employees side, ESG R&D Activities to anticipate customer trends

Table 6.2: example of Environmental Layer as input of Balanced Scorecard

Social Layer	
Financial Perspective	Increase company profitability expanding the market for being known in respecting the social responsibility. Achieve (if possible) social awards
Customer Perspective	Increase customer awareness for being a leading social respecting company Uniform CRM among countries and sub-companies
Internal Perspective	Balance the number of male / female employees Balance discrepancies in the remuneration
Learning & Innovation	R&D to produce valuable patents and be socially recognized as Innovating Company

Table 6.3: example of Social Layer as input of Balanced Scorecard

Once the 3 tables above have been fulfilled, it is possible to massively aggregate the information into a single-recap table and provide (if possible) a metric and/or a parameter indicator to measure the interested variable, as shown in the table below.

	Variables	Measure
FINANCIAL PERSPECTIVE	Reduce Costs, Increase Revenues.	<i>Cost of YTD Revenues / T-1 YTD CoR</i> <i>Actual YTD Revenues / T-1 YTD Revenues</i>
	Increase EBITA, Correct usage of financial leverages	<i>EBITA, D/E ratio</i>
	Reach public European investments funds for being compliant with CO2 emissions	<i>Actual CO2 emissions / CO2 emission target (target ratio: 1 or less)</i>
	Being eligible from the national government for tax relief	<i>Y/N</i>
	Increase company profitability expanding the market for being known in respecting the social responsibility. Achieve (if possible) social awards	<i>Brand notoriety index to be a socially responsible company</i>

CUSTOMER PERSPECTIVE	Reach a superior quality product through changing supplier for components bought	<i>Cost of New Supplier / Cost of Old Supplier Number of New defective components / Number of Old defective components</i>
	Increase Value Perception of the brand	<i>Brand notoriety index to deliver valuable, high quality products and services. Rating of CRM</i>
	Increase Customer Satisfaction for EOL of the product and Recycling procedures	<i>% of customer satisfaction for EOL of the product % of recyclable parts of the product</i>
	Being known in the market to be environmentally friendly and sustainable	<i>Brand notoriety index to be environmentally friendly and sustainable company</i>
	Increase customer awareness for being a leading social respecting company	<i>Brand notoriety index to be a valuable social respecting company</i>
	Uniform CRM among countries and sub-companies	<i>Homogeneity of CRM among countries (rating)</i>

<p>INTERNAL PERSPECTIVE</p>	<p>Reduce Production Time; Issues' collection to enhance effectiveness</p> <p>Bonuses rewards if milestone is achieved in time and within budget</p> <p>Develop a sustainable manufacturing system with lowest possible environmental impact</p> <p>Balance the number of male / female employees</p> <p>Balance discrepancies in the remuneration</p>	<p><i>Set a Takt time to respect customer's demand</i></p> <p><i>Number of issues solved / total issues detected</i></p> <p><i>Time target for the milestone vs Actual Timing</i></p> <p><i>Budget target for the milestone vs Actual Budget</i></p> <p><i>% control in the production steps (to be below a certain boundary)</i></p> <p><i>Gender Ratio</i></p> <p><i>Difference between specific employee's remuneration and reference remuneration</i></p>
<p>LEARNING AND INNOVATION</p>	<p>Develop Skills, Recruit Talent, Adequate R&D Activities, Anticipate Customer Trends, Improve Automation, Develop Knowledges with dedicated courses</p> <p>Develop "sustainable skills" and environmentally friendly procedures / tasks from employees' side</p> <p>ESG R&D Activities to anticipate customer trends</p> <p>R&D to produce valuable patents and be socially recognized as Innovating Company</p>	<p><i>Average number of courses per employee in a year</i></p> <p><i>Number of specialized resources hired</i></p> <p><i>Total Expense for R&D</i></p> <p><i>% of automated processes</i></p> <p><i>% of environmental courses for operators and employees</i></p> <p><i>% of R&D activities impacting ESG fields</i></p> <p><i>Number of patents produced</i></p> <p><i>Brand notoriety index to be socially recognized as Innovating Company</i></p>

Table 6.4: example of recap table reaggregating the 3 layers

3.4.2 Identify Control Evaluate Diagram

Within the enhancement proposal of the To-Be GUEST methodology, the ICE diagram has been totally incorporated and furtherly enriched with additional features within the Risk Management part, hence this section can be neglected.

3.4.3 Market Funnel

Within the enhancement proposal of the GUEST methodology, the market funnel can be left As-Is since it provides insights for the executor and attribute ownerships to launch a product on the market.

3.4.4 Risk Management

The Risk Management is referring to a group of processes with the scope to plan the way the risks identified are approached. It deals with resources management planning, identification of risks analysis, responses, and monitoring & control within a project. The risk management is more connotated with the negative events that can happen with the aim of increase and maximize the positive outcomes through making appropriate decision. Risks can be scattered across many functions or maybe cannot even captured if a dedicated proper analysis is not performed. Risks have to be managed as live topic and they shouldn't be considered as solved once the analysis has been completed. Instead, risks should be approached into an AGILE methodology in order to create a centralized and transparent risk management. The risk management could lead to change the project plan in order to maximize opportunities and minimize treats.

There are several critical success factors within the Risk Management; probably the most important is to let the whole organization recognize the Risk Management as superior profitability generator that maximize the probability of project success and hence as a component that increases the value of the organization. Cover also a crucial role the importance of having a high degree of individual and overall organization commitment for the project and the importance of having a open and honest communication, while looking at the integration with the overall developing phases.

Perform an accurate analysis in this phase can impact:

- Reorganization of the budget for resources;
- Reorganization of the budget for contingency;
- Possibility to introduce new stakeholders;
- Possibility to have a new communication structure and interaction rules within actors;
- Ensure a contingency capital intended as reserve, and not as expense;

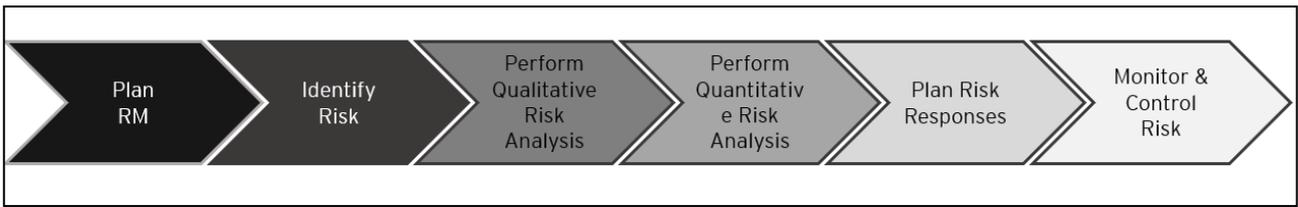


Figure 6.5: Essential Steps for the Risk Management

The approach to the risk management deals with a first phase where the planning of the Risk management is settled, which traditionally involves the stakeholder approach to financial risk. For the new GUEST methodology, it is recommended to go beyond the pure financial risk and consider also ESG themes. It could not be mandatory to fulfill all the themes just mentioned because in some case these areas couldn't be in scope or applicable for the project purposes. The executor should divide the risk management in *Categories* with respect to Economic, Environmental, Social and Governance risks. In the Risk Management Plan, the objective is to develop an overall strategy for the project, decide how the risk management process has to be executed for the different *Categories* mentioned and integrate the overall PRM with all others project activities.

The Identification of risks is the second step, and it has to be done for each *Category* of risk. It is important to create a *Risk Register* where there will be the list of all risks divided by *Category* and associated with each of them, several information in a structured way to ensure clarity. Each risk inserted in the list should be linked with one or more *Strategy Goals* declared in the beginning of the enhanced GUEST methodology in the ***Strategy Register*** (paragraph 3.2) or to a *Stakeholder Issue* mentioned in the ***Stakeholder Register*** (paragraph 3.2.5.2). For each risk it is strongly recommended to attribute an internal person that will be appointee as risk owner, which sometimes can correspond with the responsible of the Process Involved (in which the risk is generated). In the Risk Register it can be reported also the Entity/Business Unit/Structure that deals with the risk and the identification date. It is also reported the Inherence of the risk, the degree of Control, the probability of occurrence and the Impact on the business if the risk occur. Each of these field will be colored with different colors (as usual, red, yellow and green) to indicate the importance and give provide, in a visual way, a first insight. Furthermore, for each risk row it can be fulfilled a Key Risk Indicator (KRI): it can be perceived as a precursor of the KPI. The idea behind is that the KPI has to provide alarm signals before the KPI, which has the scope of measurement and monitoring. If the KRI is well constructed it can provide trends insights and signals that something is not going as planned and leave room for further investigation from the GUEST executor. If the executor doesn't identify risks those won't be considered in managing risks and won't be mentioned in the risk register. The aim is to identify all knowable risks related to the project objectives, stakeholder

issues and strategy goal, for each *Category*. The suggestion is to perform this step in an iterative way in order to identify risks at different stages of the project.

Category	Risk Name	Reference with Strategy goal / stakeholder issue	Process Involved	Entity Impacted	Risk Owner	Identification Date	Inherent Risk	Control	Probability	Impact on Business	KRI	Action to Implement	Resources	Time	Residual risk
Financial	Risk 1	Goal 1	Manufacturing	Financial Center BU	John Smith (CFO)	01/01/2022	High	Ineffective	High	Critical	KRI 1	Description 1	2 FTE + 20.000€	1 week	High
Environmental	Risk 2	Goal 2	Manufacturing	Production Plant 3	Drew Shawn (CPO)	01/01/2022	Low	Partially Effective	Medium	Moderate	KRI 2	Description 2	-	6 months	Medium
Social	Risk 4	Stakeholder 3	Manufacturing Management	Corporate	Joyce Hatcher (CEO)	01/01/2022	Low	Effective	Low	High	KRI 3	Description 3	0.5 FTE 3.800 €	3 weeks	Low
Governance	Risk 5	Stakeholder 4	Management	Corporate	Greg McHills	01/01/2022	Medium	Effective	Medium	Minor	KRI 4	Description 4	1.5 FTE	4 hours	Low
	Risk 6	Goal 3	Manufacturing	Corporate	Greg McHills	01/01/2022	Medium	Effective	Very High	Negligible	KRI 4	Description 4	7.400 €	4 hours	Low

Figure 6.6: example of a Risk Register for the GUEST enhancement proposal

Please notice that this part wants to substitute the current ICE diagram since they have the same purpose.

The Qualitative Risk Analysis is the third step that consists in the identification of the causes of the risk and attribute it to a specific process. Once identified the process (Manufacturing, Financial, Supplying, Sourcing, Managerial etc.) that generates the risk, the information is reported in the Risk Register. In this phase it has to be performed a first ranking to obtain a prioritization of risks based on consensus, indicating the degree of inherent risk and the degree of control which will be also reported in the Stakeholder register.

Critical success factors that can lead to a successful qualitative risk analysis are:

- Stakeholder agreement;
- Agreed – upon approach;
- Agreed – upon definitions;
- High quality information;
- Correct assessment of occurrence;
- Correct evaluation of impact on individual objectives;
- Correct Identification of inherence of events;

Once completed the procedure it can be constructed, as output of the phase, a scoring matrix containing the risks prioritized with probability of occurrence and impact generated in case of occurrence, as shown in the table below. Within the boxes of the matrix can be mentioned the risks, and the combination of Probability and Impact will describe the current situation.

		Impact				
		Negligible	Minor	Moderate	High	Critical
Probability	Very High					Risk 1
	High			Risk 2 Risk3		
	Medium					
	Low					
	Very Low		Risk 5		Risk 4	

Table 6.7: Output of Risk Register - Recap table

The Quantitative Risk Analysis is the fourth step of the Risk Management and it has the objective to provide a numerical estimation of overall effect of risks and construct the KRIs for the risks. The results will be the likelihood of success and estimate a contingency reserve (negotiated with CFO or with the stakeholder in charge to decide). The quantitative risk analysis provides benefits if it is carried out with realism and coherence but can produce efforts so that additional insights values need to be justified.

The requirements for this step are:

- An accurate representation of project objectives;
- Identification of individual risk;
- Inclusion of generic risk;
- Montecarlo Simulation and/or Decision Tree Analysis;

The Montecarlo Simulation has the purpose to compare the deterministic result with a probabilistic one, to ensure a more robust and reliable solution. It is important to know that the Montecarlo Simulation would better represent uncertain scenarios and therefore can be really useful for risk management purposes. By the way, it will be kept outside of the scope of this study for the GUEST enhanced proposal.

Critical success factors for the Quantitative Risk Analysis are:

- A prior correct quality risk analysis;
- Appropriate and correct Multiple Social Business Network;
- Unbiased and high-quality risk data;
- Collection of individual risks to obtain the overall project risk;
- Direct link between Quantitative Risks and Qualitative Risks;

The results of this phase is how much contingency we need to allocate, what's the chain that the risk trigger with a statistical probability of occurrence, probability distribution of possible outcomes. This phase is much more facilitated and can be enhanced if historical data are available and can be exploited. Alternatively, a questionnaire can be submitted to different actors, especially if the project deals with a specific innovation for which reliable data are not available yet. It is possible to iterate the analysis in specific time horizons (periodically) or at occurrence of specific critical events.

Effective representation of results of quantitative analysis should be:

- Data on probability distribution of project completion;
- Total costs & expected value of project decision;
- Probability of achieving project objectives (timing and budgeting)
- Amount contingency reserve (in cost, time or resources)
- Identification of most relevant risk (sensitivity analysis and variation in costs and criticality index analysis in scheduling)

The Planning of Risk Responses phase determines the effective actions that are appropriate to manage properly risks singularly and the overall risk. The purpose is to determine a set of actions which can lead to maximize the chance of success of the project. The cost of risks responding must be less than the monetary equivalent of going beyond expected project outcomes in terms of costs. It is crucial to distinguish the correct timing in Risk Response: some risk response may be preventive, while other could be reactive. Typically, each risk should have its Key Risk Indicators, and through which it's possible to catch possible alarms for a specific risk field. It should be reminded that risks are very complex especially in the sequence of events that start with a single specific event that triggers other undesired potential outcomes.

A further advice is to manage the threats on the base of the relative convenience:

- Avoid a threat: may require modifying part of the project scope/plan to avoid the interference between project and the threat;

- Transfer a threat: it involves very often a third party to which transfer the totality of responsibilities or a part of them (e.g., insurance companies);
- Mitigate a threat: implement action plans to decrease the probability and impact of a negative event;
- Accept a threat: to be chosen just in case in which the previous points aren't feasible, it entails to not take any position or undertake any actions unless the risk occurs.

Hence there should be developed response strategies for individual risk, sets of risks and end project risks, as shown in the scheme below:

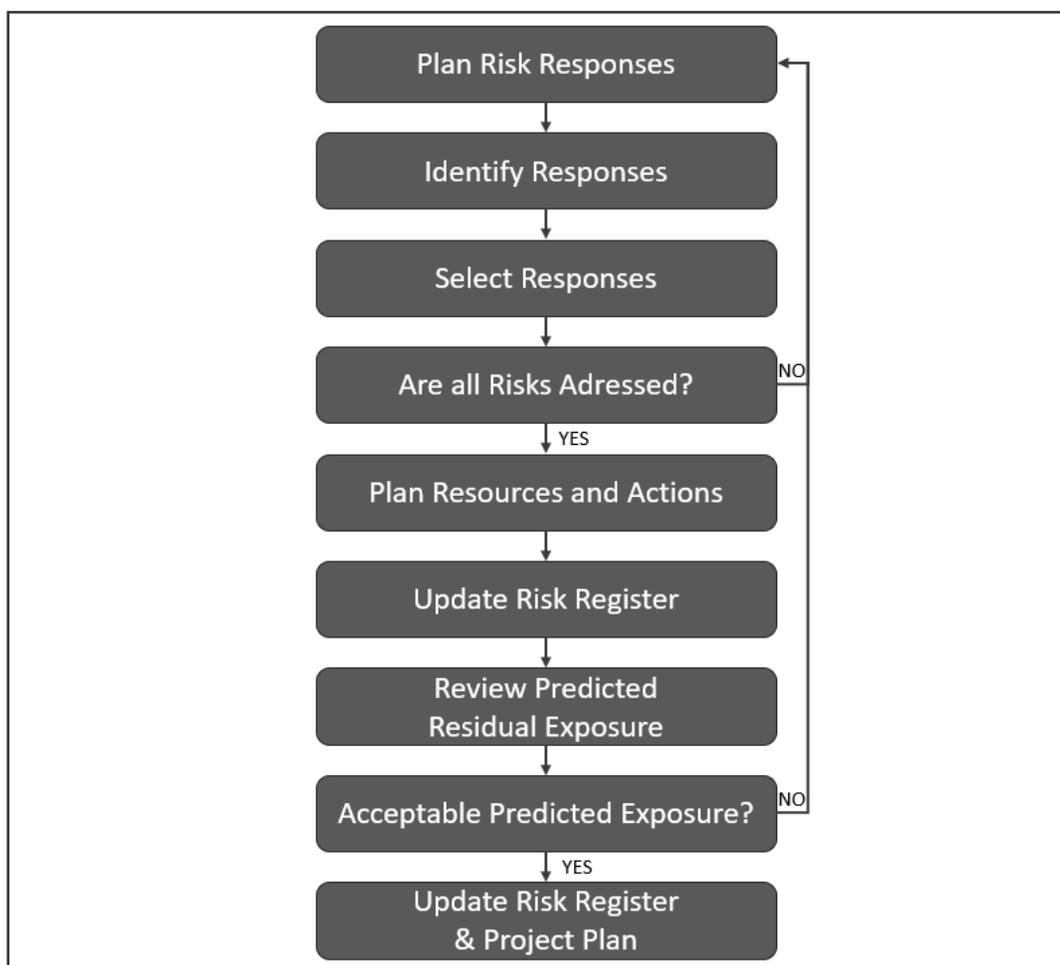


Figure 6.8: Response's Strategy

3.5 SOLVE PHASE

The proposal for the Solve phase in the new GUEST methodology takes, as starting point, the original Solution Canvas used in the traditional GUEST methodology, that has been reviewed and enriched with specific feature that wasn't considered before.

3.5.1 Solution Canvas

This solution canvas is the output of the entire GUEST methodology: it contains the most relevant information for project's purposes while considering Financial, Environmental, Social and Governance perspectives. Therefore, within the proposal shown in the picture below, there can be found some blocks that were missing in the original version and which are crucial for a high-level project overview and an integrate functional solution.

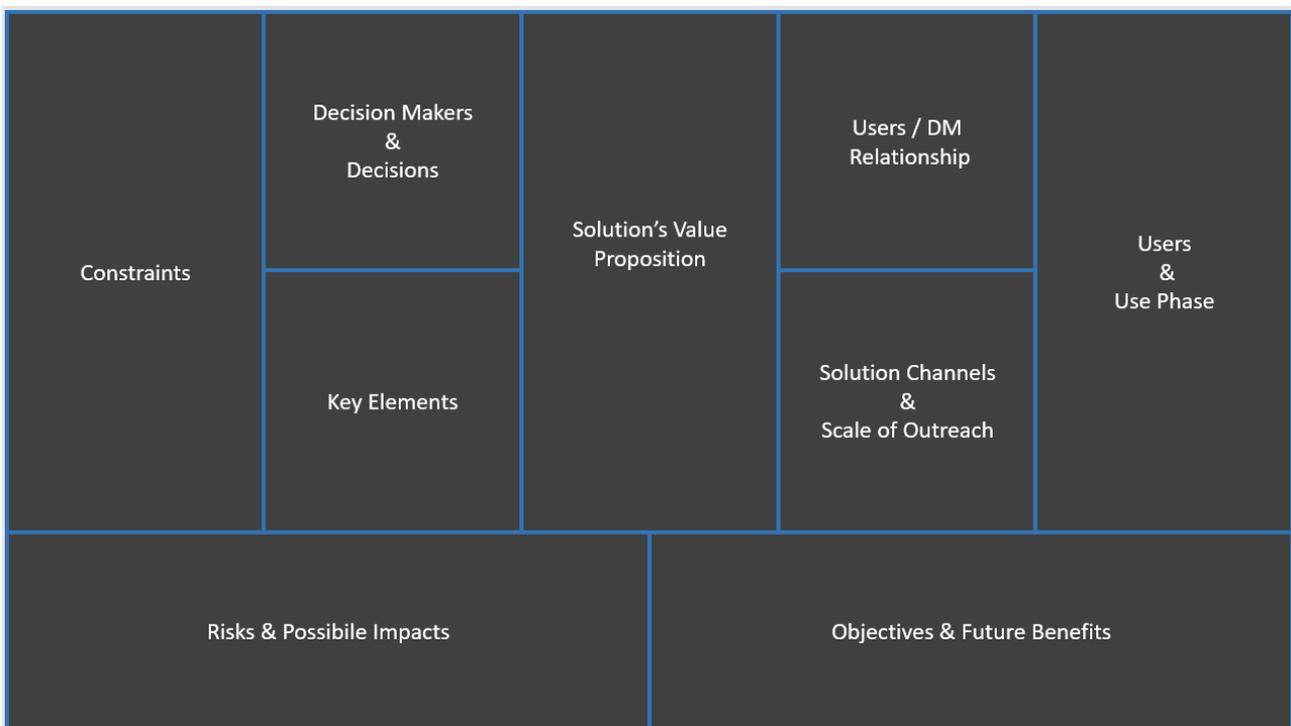


Figure 6.9 – New proposal for Solution Canvas

Below a description of the building blocks that have been introduced or has been modified with respect to the original version.

3.5.1.1 Solution's Value Proposition

In the middle of the Solution Canvas there is the Solution's Value Proposition block, which substitutes the original block of the "Decision Maker". It involves the project's mission, and it states the value generated from the solution.

3.5.1.2 Users & Use Phase

The correspondent section in the original GUEST methodology was the “Users” Block. The addition of the Use Phase is made to also consider the environmental factors that are strictly tied with the users.

3.5.1.3 Solution Channel & Scale of Outreach

The addition of the “Scale of Outreach” to the enhancement proposal for the GUEST methodology, comes from the Social Layer of the TLBMC and it contains complementary information to the Solution Channel block.

3.5.1.4 Decision Makers and Decisions

The decision maker block has been merged with the Decision block to have a better overall perception of such topics. Basically, it is reporting the same information that were considered in the original GUEST but merged into a unique block.

3.5.1.5 Key Elements

This building block is substituting the “Information Resources” block. The Key Elements blocks is considering those indispensable functional elements across resources, specialized employees, materials and all those factors that are required for the solution implementation and deliver.

3.5.1.6 Risks and Possible Impacts

This section is substituting the Cost block in the original GUEST methodology. The Risk comes from the risk management part, while the Possible Impacts part deals with undesired outcomes tied with financial, environmental, social or governance aspects.

3.5.1.7 Objectives and Future Benefits

The building block of “Objectives and Future Benefits” deals with the statement of the strategy goals and the future benefits deriving from the correct adoption of the specific solution. Conceptually, it is the opposite block of the Risks and Possible Impacts. The Objectives are the project’s goals or strategy milestones, while the future benefits are the positive consequences coming from a correct execution of the project’s plans, hence all the desired potential outcomes.

3.6 TEST PHASE

The last step of the enhancement proposal for the new GUEST methodology is based on the original version and has the purpose of monitoring the project status using several metrics (KPI, KRI and relative benchmarks) to pursue the goals. In this phase it is crucial a periodic monitoring of metrics, in order to understand if the project is running within budget and schedule. Hence, there will be introduced some project metric indicators in order execute properly this step. The introduction of such metrics allows to quantify the overall performance and bring advantages in the adoption tied with the identification of issues of cost/timing before they become critical, helping the workforce and the teams in focusing in complete their jobs.

The metrics that will be useful for this phase are:

- Budget Cost Work Scheduled (*BCWS*), also known as Planned Value, is the baseline of the budget and can be expressed in terms of days or monetary value. It is the cumulated planned amount (preventive) to realize the project activities up to a specific date. It is obtained by attributing for each month the relative budget portion, detailed by period;
- Budget Cost Work Performed (*BCWP*), also known as Earned Value, it is the budget value of the activities realized at the current date. It represents the value created from the project's activities up to the measurement date (consumptive);
- Actual Cost Work Performed (*ACWP*) is the effective expenses incurred and recorded up to a specific time point;
- Cost Variance is an indicator of efficiency in terms of costs, taking as reference the planned cost. It is calculated as $CV = BCWP - ACWP$. A positive value indicates a money saving, else it represents an extra expense.
- Schedule Variance indicates if the project is in line, in advance or in delay with respect to the original plan schedule baseline. It is calculated as $SV = BCWP - BCWS$. A positive value indicates that the project is going faster that planned, otherwise it is running in late.
- Budget Variance indicates if, at the current date, project expenses are below or above the planned. It is calculated as $BV = BCWS - ACWP$. A positive value means that the project is incurring in less expenses than planned (hence it represents a saving of capital).

There can be calculated also 2 indexes that gives a deeper explanation for budgeting and timing and are complementary to the variances just mentioned.

Those indexes that are constructed from the original indicators are:

- Cost Index $CI = \frac{BCWP}{ACWP}$
- Schedule Index $SI = \frac{BCWP}{BCWS}$

In conclusion, the TEST phase for the GUEST enhancement proposal will be a step to be executed in a recurring way, in order to catch possible issues and shows (eventually) costs at a certain point of time. Once computed the total budget it will be possible to inform the stakeholders of the project status in terms of capital and time and leave room for further adjustments to pursue a sound strategy's final goals.

4 Application of the GUEST Enhancement Proposal

In this last section of the elaborate there will be applied the enhancement proposals for the GUEST methodology that have been object of study and discussion in the chapter 3. The application of the enhancement GUEST proposal will be done on a Use Case on which it has been already applied the traditional GUEST methodology in the past. Such application has been done for the Amazon Innovation Award (AIA 2019) contest by a group of students following a PhD course of Polytechnic University of Turin: in their project work, Albore Leonardo, Antoci Carla, Artero Francesco, Papalia Lorenzo Alberto, Schiavello Giuseppe and Trovato Francesco presented a possible solution for the Amazon contest case, which will be better detailed in the Use Case introduction, the following paragraph. It is important to underline that the basic idea behind the strategy selected and the solution proposed for AIA 2019 will remain the one discussed from the PhD student's project group, but it will be reviewed the approach to the steps, due to the differences between the original and the enhancement proposal of the GUEST and then a comparison of the results obtained with a GAP analysis.

4.1 Use Case Introduction

The Amazon Innovation Award of 2019 was challenging participants in designing a network solution that generates the lowest carbon footprint at the highest speed, hence to think about different levers how to eliminate waste in Amazon's supply chain. In order to reduce the complexity of the study only outbound and reverse logistic is in scope.

To be considered:

- Sustainability levers such as change/upgrade transport mode and energy source, optimize network, improve utilization, look for new technologies and services and mobilize employees and customers.
- Different CO₂ emissions per transport mode, facility type (kWh & waste) and package type

The AIA 2019 was challenging topics that are actual also today, with focus on innovation, waste reduction and that are sustainable oriented with social impacts, on which it is possible to apply the new proposal for the GUEST methodology. To better understand the reference context on which the solution has been applied it is important to start to analyze Amazon's position considering, when relevant, the 2019 as reference.

Amazon is – and also was - the company leader in the e-commerce industry, which offers to its client a very large variety of products which, in some case, can be delivered to the buyer within 24hours from the transaction. Amazon is a holding that owns 6 “minor” entities within it, which deals with services tied to e-commerce, hardware and software, entertainment, editor and online services. The most profitable company within the group is Amazon Web Services (AWS), which is a company that provides cloud computing services on a dedicated platform on demand. From the data shared by the company, in 4th trimester of 2018, AWS was representing the 58% of total Amazon’s revenues.

From an emission perspective, the 78% of the total emission related to Amazon’s services is constituted by indirect emissions (scope 2). In particular, the 31.3% of total CO2 emitted from the company derives from packaging and shipping activities, which then are summed to the rest of CO2 generated in the upstream processes.

The solution proposed for AIA 2019 from the PhD students was named Amazon Green Community and, through a “gamification” process, would have led to a minor CO2 emission level for the company. In the document submitted from for the contest, it emerges that the gamification can be seen as a strategy based on the application of elements that typically are coming from the gaming world, as objective goals, awards and prizes, classifications and rankings. The gamification is focused in the creation of a strong community among users, which will be directly involved in the process and that should therefore assume behaviors that will lead the final user to try to gain rewards within the system. Amazon Green Community is based on the incentivization of the Amazon’s buyers to choose a “green delivery” through incentives, thus during the selection of the shipment.

Basically, the delivery solutions proposed in the Amazon Green Community were three, detailed in the table below:

Delivery Type	Description	Impact on Emissions
Amazon Locker Withdrawal	Collection / return of a product from an Amazon Locker located in the city	Reduction in emissions due to reduction in the total distance travelled from a single delivery van
Bike Delivery	A cargo bike will execute the delivery, from a mobile repository, which will be used as local headquarter from which the bikes will start their round	Satisfying reduction in emissions caused from the usage of non combusting vehicles in the “last-mile” delivery

Green Delivery	Postponing the delivery to increase the level of filling of trucks (when possible)	Theoretically it would decrease the number of operating vehicles in circulation, and hence the total emissions generated
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Table 7.1: detail of Amazon Green Community delivery solutions

Once the user selected the environmental-friendly delivery solution that the Amazon Green Community offers, the user will receive an amount of points, namely Green Points: each user will display in its profile a point balance and the cumulated Green Points can be used within Amazon’s platforms to obtain awards such as gift-cards, coupons, exclusive offers and more. It will be possible for the user to gain Green Points even on product’s return through the usage of Amazon Lockers. The Green Points should be cumulable and once reached a sufficient amount it will be possible access to the award for the user. Therefore, the strategy proposal is aligned with Amazon’s customer perception, putting him at the core of its business services and allows a further pursuing of the “Customer Obsession” business model.

4.2 GO

In this very first step it is important to declare the Goal associated with the Amazon Green Community project. For this purpose, it is used the Stakeholder Register to list and declare Financial, Environmental, Social and Governance Goals. Below a brief recap of the Goals, for each category.

1. Financial: Respect the Initial Budget Investment
2. Environmental: Match the CO2 reduction emission target
3. Social:
 - a. Ensure Health and Safety for the entire project duration and during the deliveries
 - b. Spread of Amazon Green Community and create a new trend for deliveries
4. Governance: Being compliant and eligible for national tax reduction based on respecting the boundary of emissions

Category	Goal Name	Description	Start Date	End date	Progress	Stakeholder / Internal department Involved	Associated Risk
Financial	Respect Budget Investment	Respect initial budget investment Respect initial scheduling plan	01/01/2019	31/12/2019	Planning	Management CFO	Overcome the initial budget expenses or time schedule
Environmental	Match CO2 Reduction Target	Achieve CO2 emissions to match the target declared during the assesment phase through the environmental friendly deliveries	01/01/2019	31/12/2019	Planning	Management Logistic dept.	Do not achieve the emission target due to climate risks forcing the usage of traditional deliveries, especially during the winter
Social	Ensure Health and Safety for the project duration	Health and Safety are at the very first place and can be tricky to have bikers around the city for deliveries if they doesn't follow the standards	01/01/2019	31/12/2019	Planning	Bikers	Loss of reputation due to not respect the safety conditions for workers; Being responsible in Law for sinisters during working time;
	Spread of Amazon Green Community	Amazon Green Community can be a new trend for millennials and for each Amazon buyer. Achieve the minimum critical mass is fundamental to launch the very first Amazon Greenwave.	01/01/2019	31/12/2019	Planning	Marketing	Do not achieve the minimum critical mass for the pilot survival
Governance	Being compliant with future National Law on emissions	Being eligible to recieve tax reductions for being compliant to national laws in emissions	01/01/2019	31/12/2019	Planning	Management	Do not be eligible to recieve tax reductions and being not compliant at national laws in emissions

Figure 7.2: Strategy Register Applied for Amazon and Amazon Green Community

4.2.1 PESTLE Analysis

For a depth comprehension of environment under exam the PESTLE analysis will be carried out for the analysis of direct and indirect external factors, specific applied to Amazon and Amazon Green Community project.

4.2.1.1 Political

Being an online e-commerce platform, Amazon operates almost in all over the world and hence not in any specific geographic area. The worldwide political influences are incorporated from the Holding Company with organizational plans through which develops and applies ad-hoc strategies. The political stability of a country could influence the performances and the possibility of expanding the business. Amazon Green

Community would help Amazon in trying to be compliant with the recent national and international political influences with focus on CO2 emissions reduction.

It is remarkable that even if the firm operates worldwide, the Amazon Green Community would be implemented within the cities, and hence the need to deal with local political administrators.

1. Economic

Amazon's revenues have grown over the years (growing twelvefold in eleven years), nevertheless profit operating has declined steadily due to large investments in several European countries. Customers' disposable income is increasing - this is a great opportunity for Amazon because it means that customers are increasingly able to purchase products of their choice; on the other hand, the Economic recession of some European countries could affect Amazon sales. The recession of some countries leads manufacturers to rely on Amazon Fulfillment to have the ability to reach consumers across Europe: This increases Amazon's product offering and could increase the profits made by logistics services. Supply chain costs, such as manpower, equipment cost, and investment in innovation are further factors that affect Amazon's profits; Amazon's strategy of offering the best at the lowest price with the fastest possible shipping generates high logistical costs. The Amazon Green Community idea involves investment costs, the creation of a fleet of bicycles and mobile depots and the expansion / purchase of new Lockers to be added to the already present one in the urban area. By the way, Amazon Green Community would lead in a reduction of fuel costs and a minor depreciation of van due to their less utilization, but both would be more than compensated by salaries of bikers. Taxation and currencies exchange rates are two important factors that certainly furtherly affects Amazon's profits.

2. Social

Social factors, such as trends and behaviors, certainly affect Amazon's performance. Extensive network coverage and ease of subscription create millions of potential customers for Amazon. The easiness of Internet access and the increase in the number of mobile devices have intensified this relationship. The app Amazon is available on both Android and iOS, and the mobile version of the website is easily accessible from any mobile device - this allows people to shop anytime and anywhere. Millennials are excited about online shopping and at the same time seniors who prefer or are unable to go out can use the online shopping facilities by Amazon: Amazon can certainly take advantage of this opportunity, through a simple interface layout that is easy to use for all. Services like the Prime Video streaming platform or the excellent delivery system are capable of take

care of the needs of consumers and offers them convenience. The Amazon Green Community will incentivize the customer to take advantage of the possibility of delivery and returns directly to the closest Locker and gain green points. The social impact of Amazon Green Community will be positive and would be widely shared from the population especially from millennials, for which the new environmental-friendly deliveries could become a trend.

3. Technological

Technology is a core part of Amazon and made it possible to become one of the companies most profitable in the world. It has enabled Amazon to reach customers around the world through its website and has had a major impact on business strategy. Without Internet, Amazon wouldn't have existed. Amazon constantly focuses on technology: its offering includes online entertainment platform as well as Amazon Web Service, which is for sure the core technological business of Amazon. AWS provides services of large data analysis, blockchain, calculation, machine learning, storage and serverless services, as well as migration and IOT services. Also, the services artificial intelligence such as Alexa and AWS machine learning services are easier to access and more common from use: The number of companies relying on AWS is increasing, allowing Amazon to continue to expand its operations. Amazon also sells self-designed and built devices, such as the Amazon Kindle series, the TV stand Amazon and the Amazon Alexa series. Technologies and innovations are critical to Amazon's manufacturing operations - the company focuses its investments on automation to increase the number of touchless operations and equipment, such as automated guided vehicles and intelligent robots, are key to improving the supply chain of the company, reduce production and logistics costs and create value.

4. Legal

The actual legal situation is very heterogeneous across the world about the e-commerce. Typically, the communities are trying to regulate the e-commerce through ad-hoc laws that generates impacts for both sellers and buyers. The laws that have been or will be created are always done with the intent of protection during the online transaction. Another emerging legal topic instead, regards the bikers of the Amazon Green Community project: the supposal was that each biker is not considered as "self-employed". The Figure of the biker would become regulated by laws at the national level, in conjunction with those of the company. The figure of the biker, however, still has a different value depending on the European countries in terms of regulation. Amazon's operations must comply with different laws and regulations. There are several legal factors that can affect

Amazon, such as antitrust laws, data protection and security laws on customer privacy, as the General Data Protection Regulation (GDPR).

The Antitrust European has launched an investigation to assess whether Amazon's use of sensitive data collected from suppliers independent on the Amazon platform could infringe EU competition rules. The investigation will analyze the agreements between Amazon and the resellers: these agreements allow Amazon, as a reseller, to use data from other suppliers who are competitors at the same time. Another focus of the EU antitrust investigation is the role of data in the selection of 'Buy Box' winners and the impact of the potential use of competitively sensitive information collected by vendors on the market during the selection process. In December 2018, a European regulation removed geographic barriers to e-commerce: with the abolition of the geo-blocking, e-commerce has benefited not only from the point of view of consumers, but also of sellers, both inside and outside the Amazon marketplace. The websites of e-commerce will no longer be able to automatically redirect customers to the local version of the site Web; customers will also be able to shop freely from a website located in a different country: this one it might create additional sales opportunities for suppliers on Amazon, but at the same time it can be seen as a threat to the logistics system, which may need to be carefully reviewed. European attention is paid to the regulation of technology companies, due to concerns of the public on market surveillance and data protection violations. The Commission Europe is facing the challenge of how to apply European values to the digital economy in an effort to develop a new standard agreement on social contract between technology companies and the jurisdictions in which they operate.

5. Environmental

Ordering online takes less energy than driving in physical stores as well to the purchase or withdrawal, but at the same time the consumption of energy to maintain the operations could be huge. A major challenge for Amazon is reducing the overall emissions generated from the usage of storage, to ensure the correct operation of the equipment, control of the temperature of the warehouses, to prevent the degradation of products are important environmental factors to consider. Amazon's traditional delivery service furtherly increase the emissions. Amazon's logistics system is one of the main features of the company, but it must be managed with care in order to reduce emissions and minimize the impact on the environment. Amazon Green Community would have definitively a positive environmental impact thorough important emissions reduction caused from a reduction in the total distance travelled from a single delivery van and decreasing the number of operating vehicles in circulation, and hence the total emissions generated.

4.2.2 SWOT Analysis

The SWOT analysis is carried out in the GO phase to qualitative assess and schematize the current internal and external factors on which Amazon Green Community will be subject to.

Below the recap table of the analysis:

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Emission Reduction • Positive Social Impacts • Limited Initial Investment • Positive Market Impacts 	<ul style="list-style-type: none"> • Potential problems for project's locations of facilities • Dependence from local authorities • Minor indirect financial returns
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Possible new trend for millennials • Adoption of the innovative model for delivery services • Increase the overall company value • Strong environmental implicit message to the industry 	<ul style="list-style-type: none"> • The overall success is dependent from the diffusion rate • Climate dependency and loss of efficiency • Usage rate too low

Table 7.3: SWOT analysis for Amazon Green Community solution

4.2.3 Porter's 5 Forces

The Porter's 5 forces analysis has been applied to Amazon company and to Amazon Green Community project, to properly understand the dynamics that governate the industry.

1. Rivalry Among Existing Competitors:

The company operates in the online-service world and is largely known for the e-commerce, its market is a very competitive one. The main Amazon's competitors are E-bay and Alibaba group. By the way, nowadays each company has got a dedicated website: nevertheless, other companies often prefer to sell their products on Amazon, in order to access the greatest possible visibility in the shortest time. Furthermore, what distinguished Amazon from the competitor is the quality of its entire business: from the easiness of buy within the website, the guarantee during the overall shopping phase and also later, with the high-quality customer service. The service provided is more efficient and customer-oriented with respect to its competitors, and this might be due also to Amazon Logistics. In the last years, in some country Amazon decided to vertical integrate its supply chain, buying airplane fleet and

trucks, becoming independent from shipment companies such as FedEx, Ups or TNT. This strategic initiative was taken knowing the growing trend that is still occurring in the e-commerce world, and hence allows Amazon to defend its position, attributing a superior independence role. The overall industry rivalry is high.

2.Threat of New Entrants

The industry in which Amazon operates has the lowest barriers to entry ever, thanks to internet spread. Nowadays it is extremely simple to create an online website and provide the same services that Amazon provides: everybody can do it. Hence, potentially, a new micro-competitor could always join in the market. By the way, possible new entrants wouldn't be known and famous as Amazon and its main competitors; moreover, for new entrants it is not ensured possibility to survive within a such highly competitive market. Therefore, the overall risk t is moderate.

3. Bargain Power of suppliers

Amazon created its business model that relies on a strength collaboration with its suppliers. Amazon's network counts more than one million and half of suppliers for which Amazon stores at least one product in its inventory stocks. Amazon's suppliers are not uniform, since there are very different sized suppliers that sells their product on the platform: typically, the largest number of suppliers are minor suppliers, which are interchangeable and hence this doesn't attribute any particular power to them. What ensures the quality of the end-to-end services also for a new supplier that is starting to sell on Amazon is "Amazon FBA", which is a code of conduct as guarantee of quality standards, aimed to integrate in a smart way the new suppliers to existing network. Moreover, another type of supplier on which Amazon relies are the shipment companies, which provide deliveries for the clients and without them the entire business wouldn't be feasible. This second type of supplier are hybrid / border - line to be also competitor, due to the vertical integration strategy pursued from Amazon in the last year. The overall bargaining power of suppliers is medium/low.

4. Bargain Power of customers

The Customer-Obsession pursued from Amazon makes the customer the core of its business, and they cover a key role within the dynamics of the business. The customer satisfaction covers a crucial role which generates fidelity in the Amazon-Customer relationship. Nevertheless, there always exists the possibility that every single customer has the possibility to buy from a huge number of different online stores and website. The most important concept here is that the number of customers is very high for Amazon: it is not a company

that is selling to one or few clients, and hence they don't exert any power, except the one of choosing an alternative platform (detailed in the threat of substitute products). Therefore, the bargaining power of customers is low.

5. Threat of substitute products

There isn't any particular loss or price to pay, from a consumer perspective, in switching the service platform from which they buy. A further substitute product for the customer is represented by the physic store close its house or, at most, within its town, from which he can buy the same product that he wanted to buy on Amazon. However, Amazon is actually the leader of e-commerce, due to its high-quality service finalized to the customer satisfaction. It would be easy to being substitute if the online competitor would offer a better service or would strongly lower the price. Nevertheless, the price that a consumer find out on Amazon is the market one, or eventually a special one for exceptional periods, but this is true also for physic stores and online competitors. Therefore, the overall threat of substitution is quite high.

4.2.4 Social Business Network

The Amazon Green Community project is not requiring a Social Business Network because it is not involving many actors and it won't least much time, therefore it is not necessary to represent the Social Business Network.

4.2.5 Map the Value

The Map The Value Part is computed to understand where the Amazon Green Community should focus its attention to. It is composed by the following parts:

4.2.5.1 Actors ID

As representation of fictional personas, actors' id should be addressed to a specific

4.2.5.1.1 Actor ID

Actor Name: Mario Rossi
Actor type: Client
Actor description: Mario is a University student which typically buy items on Amazon
Gender: Male
Age: 22
Location: Turin, Italy
Wage: 750€ (from parents)

Actor Situation

Jobs
Mario buys from Amazon during his free time. He is passionate of sport, and so he buys periodically new equipments. His disposal it's limited, hence he can't buy whatever he needs in one shot.

Pains	Gains
Excessive cost of shipment	Receiving the orders in time with the minimum effort
Receive a damaged product	Assistance to support the post sales activities, if required
Ask for a return due to his	
Receive a product in delay	
Contributing in polluting the environment through its shopping	

Provider

Pain Relievers	Gains Creator
Amazon tracks the entire shipping process for maintain a high standard of service	Receive a dedicated high quality service for his shopping

Product and Solutions
Amazon Green Community can help Mario in obtaining the product in time, without damages, without incurring in much higher delivery costs, with an important reduction of emissions.

Value Proposition
Reach a superior satisfaction, generated from the same personal utility of buying the product, plus an additional one generated from the reduced environmental impact in delivery phase

Actor ID

Actor Name: Francesca Russo
Actor type: Client
Actor description: Francesca is a senior strategy consultant in a big consultancy company
Gender: Female
Age: 28
Location: Turin, Italy
Wage: 1800€/month

Actor Situation

Jobs
Francesca buys from Amazon during her leisure time. She is passionate of fashion and so she buys periodically new clothes and shoes. Furthermore, Francesca is a Prime Video subscriber, she enjoys to watch movies and series during the evening.

Pains	Gains
If she buys something with a limited stock and once she goes to the payment the good is not available anymore	Receiving the orders with the minimum effort
Absence of a correct size for clothes and shoes	Receiving the orders in time
If she buys at full price and after some days the price is lower	Access to special coupons
If the illustrative figures displayed on the website don't respect the product received	Access to Prime Video huge library with the latest titles
Contributing in polluting the environment through its shopping	

Provider

Pain Relievers	Gains Creator
Absence of periodical shopping from Francesca	Receive a dedicated high quality service for her shopping, with the lowest possible environmental impact

Product and Solutions
Amazon Green Community can help Francesca in obtaining the product in time, without damages, without incurring in much higher delivery costs, with an important reduction of emissions. In case of returns, she could use the Amazon's locker and hence have the possibility to contribute in the reduction of emissions

Value Proposition
Reach a superior satisfaction, generated from the same personal utility of buying the product, plus an additional one generated from the reduced environmental impact in delivery phase.

4.2.5.1.2 Supplier ID

Actor Name: John Smith
Actor type: Supplier
Actor description: John is an entrepreneur and is the CEO a firm specialized in glass production
Gender: Male
Age: 48
Location: Birmingham, UK
Wage: Average 4600 £/month

Actor Situation

Jobs
John sells in Amazon the goods produced within the firm. He constantly monitorate the online orders received, in order to align the inventory, plan the shipments and plan the future production.

Pains	Gains
Low sales volumes	Selling online with the minimum effort
Clients claiming a new product because they received a damaged one	Accessing every day a very large number of potential new customers market
	Limitate the environmental impact tied with its business

Provider

Pain Relievers	Gains Creator
	Recieve a dedicated high quality service for its sales, with the lowest possible environmental impact

Product and Soutions
Amazon Green Community can help John in an important reduction of emissions. The risk of damage of the product is limited with a bike delivery

Value Proposition
Reach the same gain of traditional sale plus personal benefits deriving from a reduced environmental impact in delivery phase.

4.2.5.1.3 Competitor ID

Actor Name: eBay
Actor type: Competitor
Actor description: online platform where companies and privates sell their goods

Actor Situation

Jobs
After a registration requiring detailed information, the users can buy or sale products within the marketplace. The main difference from the Amazon business model is that eBay service is only aimed to match demand and supply in a unique place, without owning any kind of physical inventory. The shipment is done from the users for which eBay is not directly responsible of it.

Pains	Gains
Potential loss of users due to Amazon riviality	Fees from articles inserted into the marketplace
	Have a increasing number of new users

4.2.5.2 Value Ring

As previously mentioned, the value ring is considered as a method to detect the relevant factors deriving from the Actor-ID. The actors that have been used for the Value Ring are:

- Consumers (Amazon's users)
- Suppliers
- Investors
- Community

In order to better analyze the interests of the various actors within the Amazon Green Community, a graphical representation of the value ring is displayed below:

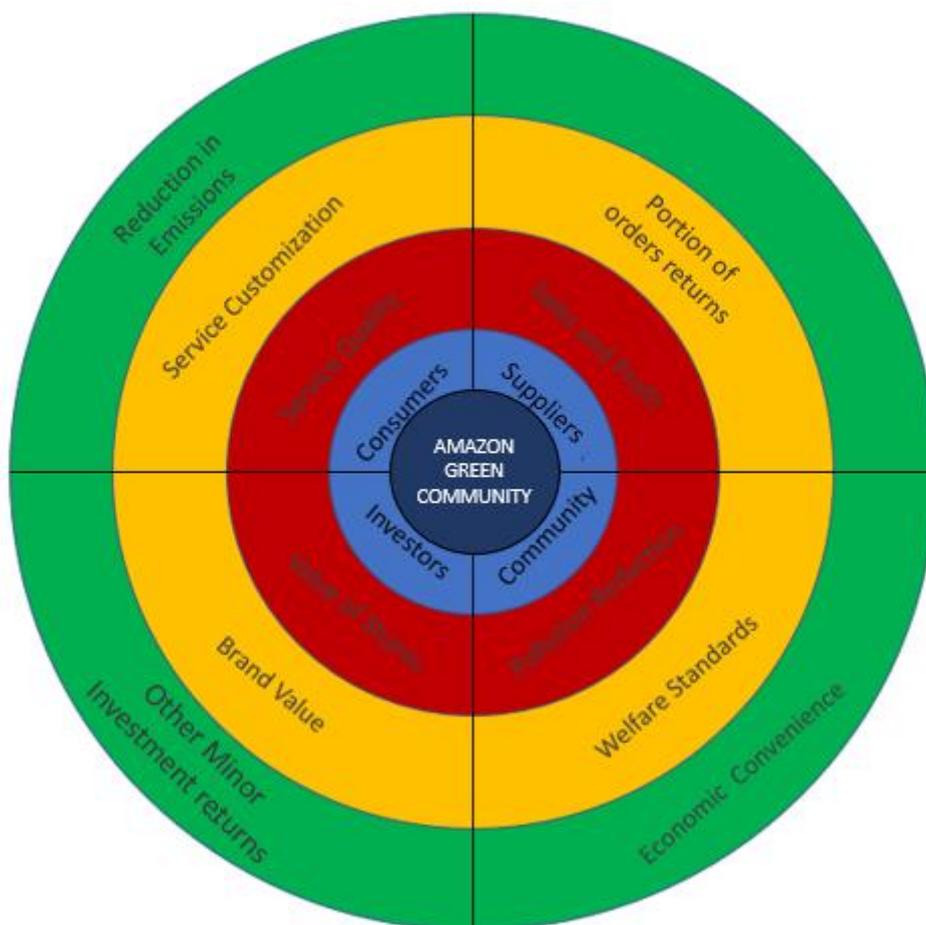


Figure 7.4: Value Ring for Amazon Green Community

4.2.5.3 Gain & Pain

In this phase it can be applied the Stakeholder Register and remark the relative importance of Stakeholder engagements which, in general, can generate numerous opportunities to improve management and performances. Attention to relationships with various stakeholders therefore is a fundamental strategic lever for responding to a new and critical acquisition of awareness by consumers and society in general. The preeminent aim of Amazon Green Community shouldn't be the minimization of expenses, but the creation of economic and social value through, as practical example, the management of the system of relations with their principal stakeholders and their maximum involvement in the decision-making processes, in particular for the customers.

Below the Stakeholder Register for Amazon Green Community

Category	Stakeholder Name	Associated Risk	Level of Control	Level of Dependency	Responsibility	Stakeholder Tensions and Concerns	Impact on Business
Financial	CFD	Overcome the initial budget expenses or time schedule	Medium	High	Medium	Low	Medium
	Management	Overcome the initial budget expenses or time schedule	Medium	High	High	Medium	Low
Environmental	Management	Do not achieve the emission target due to climate risks forcing the usage of traditional deliveries, especially during the	Low	Medium	Medium	High	High
	Logistic Department	Do not achieve the emission target due to climate risks forcing the usage of traditional deliveries, especially during the	Low	Low	Low	Medium	Low
Social	Bikers	Loss of reputation due to not respect the safety conditions for workers; Being responsible in Law for sinisters during working time;	High	High	High	High	Medium
	Users	Do not achieve the minimum critical mass	Medium	Medium	Medium	Low	High
Governance	Management	Do not be eligible to receive tax reductions and being not compliant at national laws in emissions	High	Medium	High	Medium	Medium

Table 7.5: Stakeholder register for GUEST methodology

4.3 UNIFORM

4.3.1 Triple Layer Business Model Canvas

The Triple Layer Business Model Canvas will be used in order to properly describe the peculiarity of the Amazon Green Community project within Amazon group and to figure out possible application of the strategy through extending the traditional BMC model by adding two levels.

The Triple Layer Canvas has been developed as follows.

4.3.2 Financial Layer

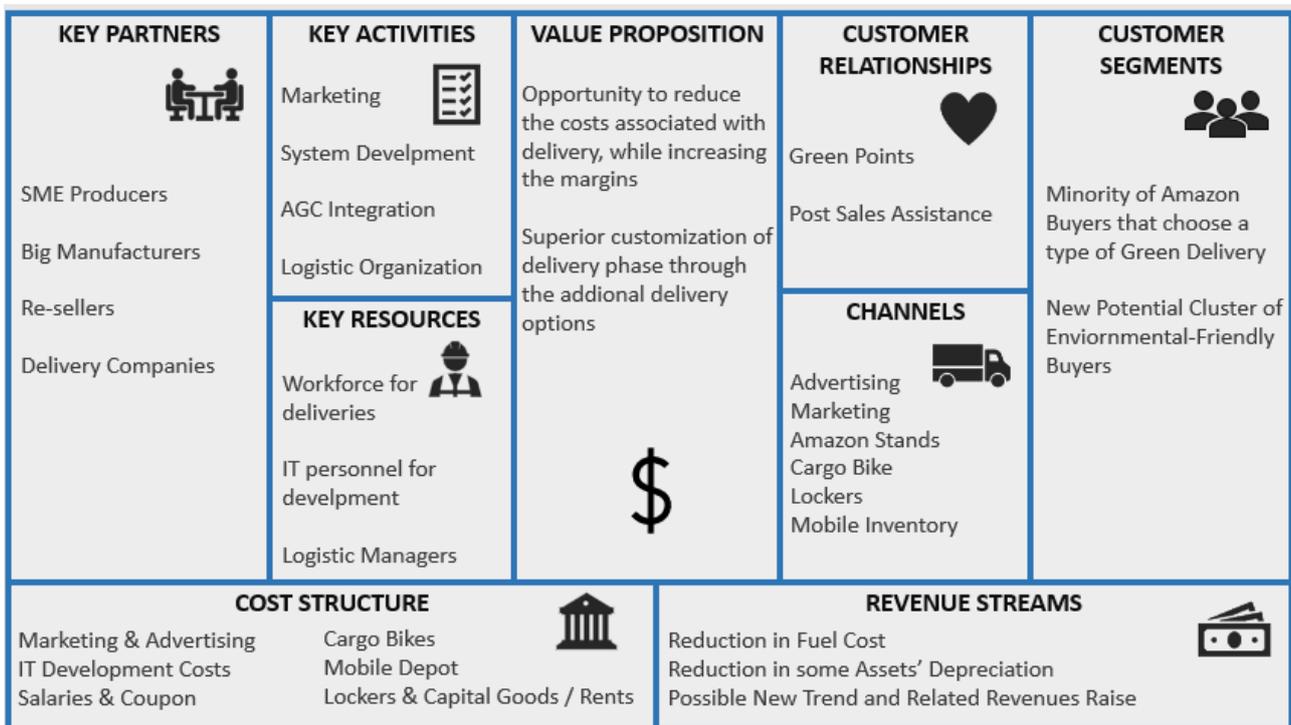


Figure 7.6: TLBMC, Financial Layer for Amazon Green Community

In the middle of the Financial Layer, it is described the Value Proposition: the opportunity to reduce the costs associated with the delivery phase, thanks to the lower consumption of fuel, will lead to an enhancement of margins for each single delivery executed. Moreover, a superior customization of delivery phase through the additional delivery options will give a further possibility to choose from both customer side first and company side then. These two aspects, jointly with emission reduction analyzed in the Environmental Layer, will definitively represent the very essentials cores of the project.

In the *Customer Segments* section, the Amazon Green Community deliveries will be chosen only by a minority of Amazon Buyers. A typical Amazon buyer is between 18 and 50 years and

the gender is irrelevant for this segmentation purpose: it is very likely that early adopters of Amazon Green Community will fall into this group. In 2014, the concerns of the population related to the environment are mainly addressed air pollution (indicated by 50% of the interviewees), the production and disposal of waste (47%), climate change (42%) and, as we well know, those numbers grew in the last years.

The channels considered for the Amazon Green Community project are the physical / virtual means through which Amazon will reach the customer: Advertising and marketing, Amazon stands in the streets, cargo bike, lockers and the Mobile Depot. The main advertising sources will be:

The Amazon online platform itself, that will be used to advertise the implementation of the new delivery systems, also focusing on the effects it has on environmental impacts. Furthermore, the introduction of new functions also includes the integration of a tutorial that allows anyone to use them to the fullest.

Advertising Posters and Amazon Green Community stands: thanks to the use of advertising spaces located in strategic points of the cities, it can make the new eco-sustainable policy known to the users who often use it these services.

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

About distribution channels, the Mobile Depot is considered one of the highest expressions of sustainable logistics for urban centers. This consists of towing a truck loaded with packages to be delivered, they are contained also the cargo - bikes used for home delivery of the order. The Cargo - Bikes, instead, will be used to transport the order from the mobile depot to the customer (Direct Channel), with zero impact, reducing the movements of traditional combustion vehicles. Moreover, the Amazon Locker will be in order to reduce the distances traveled by trucks: the End user can directly go to an Amazon Locker site to retire its order, once it has been delivered, or to execute a return of a package that will be loaded then on a Amazon van.

Nevertheless, there are also the traditional delivery systems such as Trucks and Airplanes. The firsts are used when distances are small or medium and where there won't be the coverage of the new delivery systems, while the airplane movements are made for longer transportation's needs. However, Amazon Green Community aims to minimize the use of these two means through the introduction of Green Points: the user will be encouraged to use Green Delivery Systems and eventually postponing the shipping date by one day, if possible.

The Customer Relationship side will be made aiming in maximize levels of customer relationship. The first is the After Sales Assistance: through the customer service, the relationship will be established with customers is aimed in support the users in the use of the application and in solving any problems, such as delays, unsuccessful deliveries, returns and defective orders. With Green Points, a gamification system will encourage the customer to use the shipping method eco, with the possibility of receiving points or benefits within the marketplace. When ordering, there will be the possibility to choose standard delivery or eco mode, receiving information on savings actual order itself, which will affect the final score earned by the user.

In the Key Resources part identifies the personnel - and hence the function covered with the associated costs - needed for the implementation of the Amazon Green Community. As first, Amazon Logistics Bikers, will execute the deliveries, taking the package(s) from the mobile depot to be delivered to the final customer. The IT personnel for development instead are specialized technicians that daily operate in Amazon. They will care about the technical implementation within the Amazon website, adding 3 types of deliveries in the delivery selection list, and will care about inserting the tutorial within specific web page. The Logistic Managers are the direct responsible for deliveries, which won't directly execute the delivery but will organize the daily routes in order to maximize efficiencies (location of mobile depot, van and bikes routes etc.). They are a key resource for a correct implementation of the development strategy, to success in management of transport and allows to have a functional delivery network.

About Key Activities, the most important to carry out is the Marketing: from the data obtained from a survey shared from PhD students during the project, it emerges that investing in marketing and advertising is essential for the strategy to engage a sufficient number of users. Mainly it is necessary to advertise what are and where are the Amazon Lockers (in survey, after explaining this service to the user, the percentage of use increases drastically, around 65-80%, depending on the age group). The main goal of marketing it must therefore be to make the customer feel an integral part of the whole process and make him understand who can personally reduce emissions, choosing between various ecological actions, and therefore, earn rewards. Therefore, marketing result to be an essential activity to make users aware of the new shipping methods, the company's further flexibility in delivery methods, show the benefits for the consumer for the environment, and entice users to use the new services offered. Nevertheless, the Development has been inserted as Key Activities since it represents a macro phase, involving many activities that will lead the implementation of the solution and the introduction of a new delivery system. There will be required an Integration between the existing Amazon's platform and the new features of Amazon Green Community, to be carried

out once the development phase has been done. It is essential to integrate the new features of Amazon Green Community within the original Amazon platform in order to maximize the chance of success for the pilot project. In the project delivery phase, the Logistic Organization will be a Key Activity to be ad-hoc carried out from logistic managers, once the integration phase has been completed and the Amazon Green Community solution deliveries will be available.

Belong to Key Partners category the Small / Medium Enterprises located around the world that produce their products and sell them on Amazon. With the Big Manufacturers, they represent the end products makers: they belong to Key Partners because without them Amazon would still exist, but it would be a useless platform without any functionality, since the user wouldn't be able to buy anything. A similar role is covered from the re-seller's category, which are still key partners, but they typically send directly products to end user – hence without sending products to Amazon's inventories – differently from manufacturers and producers. Another Key Partners are the Delivery Companies: Amazon outsources the delivery activity – actually in most of the cases – because those companies are able to reach every customer, regardless from its position, while Amazon is able to send its delivery fleet only in cities in which they have an Inventory. Nevertheless, as already mentioned, since the delivery phase is a core activity within Amazon Business Model, the company is actually pursuing gradually a vertical integration to directly taking the delivery ownership by itself. Meanwhile, it is essential to continue to enter into profitable contracts with companies shipping professionals, who will continue to play an important role – for now - in delivery and collection of orders.

In Revenue Streams block the introduction of the Amazon Green Deliveries would not generate direct earnings, but it would lead to savings directly proportional to the scale of applicability of the pilot project. Hence, the level of operational savings is directly linked to the degree of use of the service and the introduction of cargo-bikes would significantly reduce the shipping cost of all the journeys in which this will be introduced. In particular, this is reflected into savings associated with the reduction of fuel costs and the reduction in the depreciation to which are subjects mobile vehicles, due to the minor distance travelled. Furthermore, it is important to mention that the new delivery system introduced by Amazon Green Community could lead to a new possible emerging trend in Amazon sales and hence an increase of revenues. By the way, even supposing an equal number of orders received, the margin with green deliveries would be higher if compared to traditional deliveries.

The Cost Structure for the Amazon Green Community deals with the implementation of the project up to the operating part. Hence are mentioned the costs associated with the IT development costs for the implementation, introduction, integration and maintenance of the

platform. There are Marketing & Advertising cost since, as mentioned, the marketing activity is a core one for the pilot's success and hence, marketing-related expenses are fundamental to maximize the probability of success. It is necessary to reach a sufficient number of early adopters' users for the green shipping methods. For them, a Reward system will be implemented, the associated coupon – intended as a percentage reduction on price - represents a loss of revenues, and hence a cost. Of course, there will be salaries related to the entire workforce that will execute deliveries while there will be also Facilities' costs which include the investment for the purchase of mobile depot, cargo - bikes and lockers. For the lockers, it will be necessary to rent or buy a site / space in which locate them.

4.3.3 Environmental Layer

To attribute a quantitative value for the Environmental analysis it should be carried out a Life Cycle Assessment, which is out of scope for the purpose of this thesis work. Hence the environmental layer will be detailed in order to list the concepts that are behind the layer in a qualitative way for the specific Amazon Green Community project.

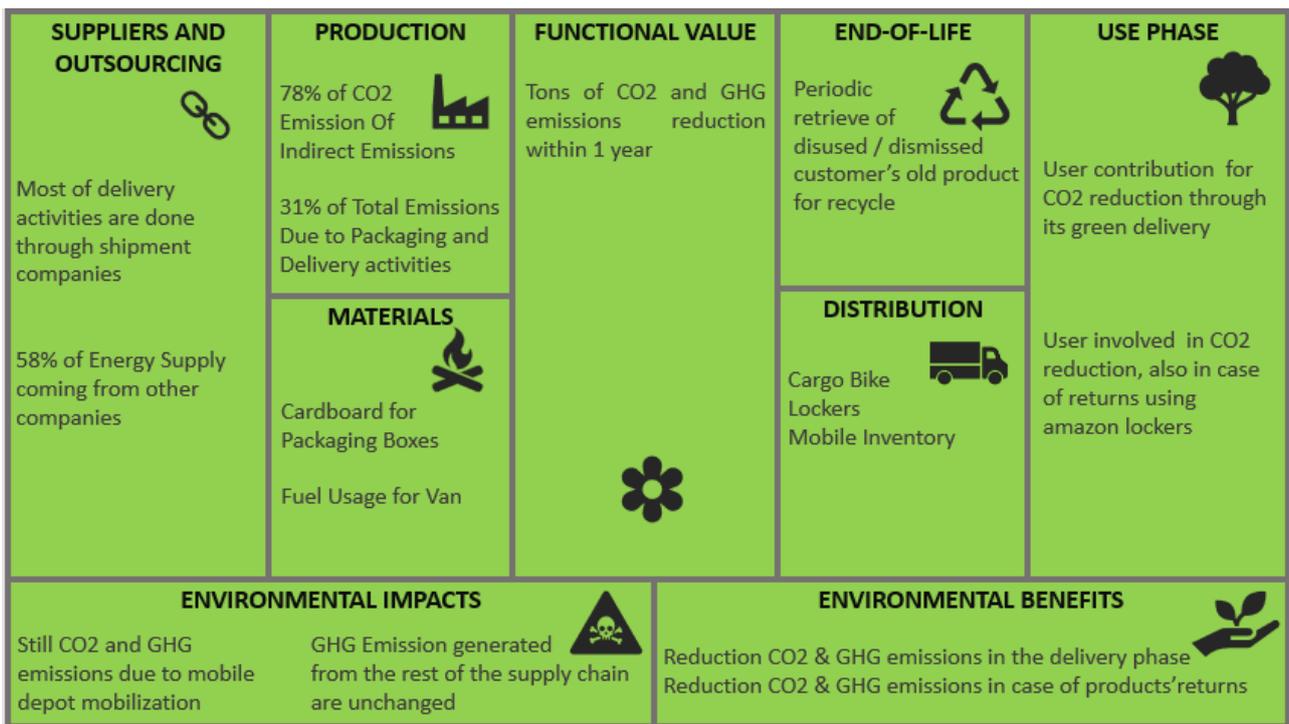


Figure 7.7: TLBMC, Environmental Layer for Amazon Green Community

The Functional Value of the Environmental Layer for Amazon Green Community is associated with the environmental merit that the project would entail. The introduction of the green delivery system matters the reduction of the CO2 and Green House Gasses emissions that would have been generated from traditional transportation means, but that now are saved

thanks to introduction of non-polluting cargo bikes and through the direct involvement of the end user in case of delivery / return of the product ordered, directly involving Amazon Lockers. The effect generated from the application of green deliveries worldwide would lead to a reduction of tons of CO₂ in a year and the overall saving will then depend on the pilot's success and from the diffusion degree of the green delivery systems.

In the Use Phase block has been mentioned the user contribution for CO₂ reduction through its choice of selecting a green delivery method and the direct involvement in emission reduction for deliveries / returns of the good directly through the Amazon Lockers. Those two aspects constitute the use phase tied with the environmental factors of the Amazon Green Community delivery system and they don't include any consideration on user's energy requirements and material resource usage as they are absent in this specific case.

The Distribution within the Environmental Layer are still inserted the means through which the customer is reached, but from an environmental perspective. Nevertheless, the physical means of the transportation modes, the distances travelled and the weights of what is shipped could be very difficult to assess in the specific Amazon Case, because the distance travelled for a single good is very heterogeneous, since a single product could be produced in each part of the world (producer location) and could reach each part of the world (customer location), while the weights of goods are always different and depends by product, therefore it is necessary to set up fixed boundaries for an eventual study and establish what is in scope. However, the cargo bikes, the lockers and the mobile depot would have a really minor impact in terms of CO₂, and this represent definitely a plus for the overall innovative distribution channels.

An idea has been inserted in the End Of Life part: it deals with a periodic retirement of disused / dismissed customer's old products with the intention of recycle them. This initiative would have a really huge impact for the entire world if applied at corporate level, because in exchange of green points worldwide users would be incentivized to furtherly participate to a recycling process that would lead, again, to a further reduction of general CO₂ emissions.

The Production block for a service company as Amazon includes different types of emissions. It is important, for this purpose, to distinguish among scope 1, 2 and 3 emissions. The belong to Scope 1 are direct emissions generated by the company, whose source is owned or controlled by the company; The Scope 2 are indirect emissions generated by the energy purchased and consumed by the company while the Scope 3 includes all other indirect emissions that are generated by the company's value chain. Amazon in 2019 had a 78% of indirect emissions and a 31% of total emissions due to packaging and delivery activities.

In the Materials block has been inserted the two main type of material that Amazon uses actually. In fact, there is an important consumption of Amazon Packaging Boxes, folders and envelopes that have a minor impact since they are widely recycled as part of the household separate collection systems organized by municipalities. Instead, the Fuel usage for traditional internal combustion vehicles used for the delivery has a non-negligible impact, rather it probably represents the largest material usage and this is why in some US countries it is in progress an electrification of the delivery fleet.

The Suppliers and Outsourcing part consider all the other different materials and manufacturing activities that are required but which doesn't represent a fundamental for the Functional Value. For this reason, it has been inserted services for which Amazon relies such as shipment companies and companies for energy supply. In particular, based on company's data, the 58% of the energy supply in 2019 was coming from other companies, but nowadays the percentage is decreasing, since Amazon is producing energy by itself. It is also important to underline that Amazon is strategically moving towards a vertical integration for both those two activities and is investing very large capital amounts to become independent. By 2040 Amazon will zero out carbon emissions, and by 2025 the business will be 100% powered by sustainable energy through mainly Wind Farms and Solar Farms.

Environmental Impacts considers for Amazon Green Community those factors such as the residual emissions generated from the mobile depot usage, which results still a necessity for the delivery model proposed. However, the Amazon Green Community project is not aimed to bring any change in the rest of Amazon's supply chain, therefore it constitutes a "minus" for the overall strategy.

In the Environmental Benefits has been inserted the background factors that are brought from the adoption of the Amazon Green Community pilot project. Those, deals with two main aspects, such as the CO₂ and Green House Gasses reduction occurring during the delivery phase and the CO₂ and Green House Gasses reduction occurring during the return phase. Of course, the first contribution will be much bigger than the second, since only a few percentages of orders bought are then sent back.

4.3.4 Social Layer

The Social Layer of the Triple Layer Business Model Canvas has been applied to Amazon Green Community Case, taking in consideration also corporate initiatives that bring social value to communities and end users.

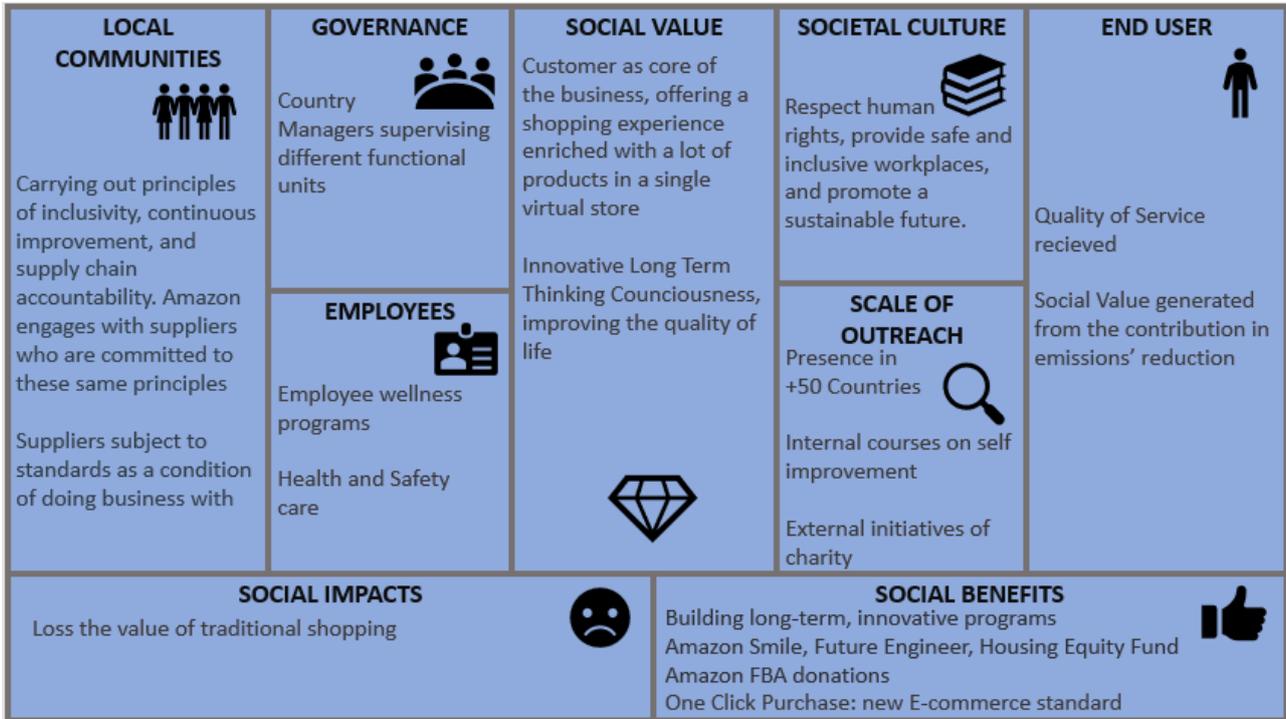


Figure 7.8: TLBMC, Social Layer for Amazon Green Community

The Social Value in the Social Layer of the triple layer business model canvas for Amazon Green Community expresses in depth the worth that is intrinsically brought to the customers to capture the mutual influences between stakeholders and the organization. Here the Amazon’s mission to put the customer as core of the business and offering him a unique online shopping experience thanks to millions of products in a single virtual store. The capability of Amazon’s innovative long-term thinking represents a further point of attention: the company is always looking forward and plans differently from “purely financial” companies, and this is reflected into the improvement of the quality of life of final users.

The End Users for Amazon often are the customers who seeks high-quality service in online shopping. Amazon Green Community project wants to provide a further value by meeting the customer’s needs in terms of satisfaction for the service received, and try to capture the social value generated by customers’ approval for emission reduction.

Societal culture block deals with the potential impacts the organization on society as a whole. For Amazon it is translated into the social impact that is emerging from respecting human

rights such as dignity, fairness, respect and equality, jointly with providing safe and inclusive workplaces.

Scale of outreach factor describes the relationships that a firm constructs with stakeholders through its actions over time. For now, Amazon is present in more than 50 Countries but this number is not in a steady state and will grow in the future, since the business is still raising. Its outreach has a social value and it is still creating further social programs such as internal courses on self-improvement, extra scholar knowledge for employees, initiatives of charity and much more.

The Employee block has to consider the role of employees as a core organizational stakeholder within the organization, and hence deals with the social initiatives to guarantee personnel's wellness. On this purpose Amazon carries out different initiatives aimed at protecting the well-being, included Health and Safety care for the person in a working environment and also for its private life.

The Governance block deals with Amazon's organizational structure. It can be classified as hierarchical, with a Senior management team that includes 3 CEOs and 3 senior vice presidents. The Amazon's hierarchical structure has been adopted due to the huge size of the business. In fact, the largest internet retailer in the world by revenues counts more than 647,00 employees worldwide.

Local Communities part is done to accounts principles of inclusivity, continuous improvement, and supply chain accountability: Amazon engages with suppliers who are committed to these principles, taking care that the goal to provide product and services in a way that respects human rights. Amazon's global teams work closely with suppliers to communicate the standards and help suppliers in building working environments that are safe and respectful of human rights. Therefore, suppliers are subject to standards as a condition of doing business with.

The Social Benefits section is referring to the positive effects that are generated from the company and are reflected on the society. Amazon has a strong commitment in conducting the business in a lawful and ethical manner, which entails enhancements for the communities and for people. For this reason, has been inserted the long-term, innovative programs such as:

- Amazon Smile, which is a way for customers to support their favorite charitable organization every time they shop within the platform
- Future Engineer, which is a program designed to inspire, educate, and prepare children and young adults from underrepresented and underserved communities to pursue computer science.

- Housing Equity Fund: includes a more than \$2 billion Housing Equity Fund to preserve and create housing that is affordable for moderate- to low-income individuals and families in communities we are proud to call home.
- Amazon FBA donations: Every day, we donate 50,000 items to help people in need. In one year, FBA Donations provided 20 million items in the U.S. and UK to support communities and help the planet, and now the program launches in France.
- Help for hunger: Amazon is committed to playing our part by donating delivery services to help food banks and nonprofits get meals to the doorsteps of people in need.

It has to be mentioned that the One Click Purchase model has established a new standard within the E-commerce business, and this for sure represents a very small contribution within the human innovation progress from which derives intrinsically its social value.

About Social Impact, Amazon Green Community and, more in general Amazon corporation, is not generating any particular social loss due to its ethic of business. It can only be considered, if we want, the loss of the value of traditional shopping, that somehow brings new generations to buy almost everything is needed through an online store and not in a physical store.

4.4 EVALUATE

4.4.1 Balanced Scorecard

Within the Balanced Scorecard there have been inserted three Layers tied with the Uniform Phase.

Financial Layer

From a Financial Perspective, the end goal of the Amazon Green Community project is to reduce costs associated with delivery and so increase the relative margins through the reduction of the cost of fuel consumption. The customer perspective of the financial layer is aimed to establish a sustainable economic plan for the green points: it means that it has to be established how much will be the discount percentage, hence associate to each green point somehow an economic value. However, it is important to mention also the marketing role for the customers: intervene with ad-hoc advertising campaign to reach - at least - the minimum critical mass of early adopters will represent a financial expense that is necessary. From an internal perspective, the most important aspect is attributed to do not exceed the budget established for the project while, in the Learning & Innovation perspective, it will be important to establish a further budget, eventually, in order to improve the overall performances and effectiveness of the new solutions proposed.

Financial Layer	
Financial Perspective	Reduce costs associated with delivery Increase margins for delivery activities
Customer Perspective	Establish a economic plan for the Green points sales. Intervene with ad-hoc marketing campaign to reach at least the minimum critical mass of early adopters
Internal Perspective	Respect the budget for the pilot project Maintain the salaries for internal employees dealing with deliveries
Learning & Innovation	Establish a budget for R&D activities aimed to improve the overall effectiveness of the Amazon Green Community

7.6: Financial Layer of Amazon Green Community

Environmental Layer

On the Financial Perspective of the Environmental Layer, it will be important to be eligible for tax reduction and hence being compliant in national laws dealing with emissions. This is one of the strategy’s goals settled up at corporate level, for which Amazon would obtain huge benefits. On the Customer Perspective, Amazon Green Community will help the company for being known as environmentally friendly and for carrying out the business in a sustainable way. From an internal perspective the most relevant environmental factor is attributed to the introduction of the cargo bikes and the lockers, which will be the core source of emissions ‘reductions. Within the Learning & Innovation Perspective of the Environmental Layer it has been considered that, except for the deliveries, the rest of the supply chain is unchanged and hence the need to have an internal R&D aimed to create new, sustainable, business solutions within those steps that are having the most relevant negative contribution in emissions.

Environmental Layer	
Financial Perspective	Being eligible from the national government for tax relief for being compliant with CO2 emissions
Customer Perspective	Being known in the market to be environmentally friendly and sustainable Directly involve the customer in some delivery solutions and give him the chance to reduce the emission during the shipment
Internal Perspective	Introduction of green delivey systems through cargo-bikes and Amazon Lockers, impacting the reduction of emissions
Learning & Innovation	Execute R&D activities to develop a sustainable supply chain system with lowest possible environmental impact

Table 7.7: Environmental Layer of Amazon Green Community

Social Layer

In the Social Layer, the strategy to pursue is the one aligned with the company’s business and ethics. So, from a financial perspective, the intention is to continue to undertake social initiatives for communities which, of course, have a non-negligible cost, but that generate a really strong positive impact on struggling people and, more in general, for the society. From wdoing online shopping and increase the customer awareness for being a leading company with a sound commitment in the social context. The internal perspective of the social layer

deals with the well-being of employees and this is translated into initiatives such as health and safety care within the working hours and for leisure time. Similarly, the Learning & Innovation parts deals with the cultural side of the company, so that Amazon should keep organizing internal learning courses for self-improvement and, as proposal, develop further effective programs to extend social responsibility in poor countries.

Social Layer	
Financial Perspective	Continue to undertake social initiatives for communities, as mentioned in Social Benefit block of Social Layer of TLBMC
Customer Perspective	Increase customer awareness for being a leading social respecting company Offer a valuable experience, from the buy to the eventual post sales assistance
Internal Perspective	Continue to carry out different initiatives aimed at protecting the employees well-being, included Health and Safety care for the person in a working environment and for private life
Learning & Innovation	Keep organizing Internal Learning Courses for self-improvement Develop further effective programs to extend the social responsibility also in poor countries

Table 7.8: Social Layer of Amazon Green Community

4.4.2 Risk Management

Within the risk management part has been inserted several risks for each category, that could occur and that are liked with the strategy goals or with a stakeholder issue.

Below the detailed list of categories and associated risks found:

- Financial Category:

- Overcome the initial budget expenses, where a delay caused from an issue could be reflected in extra expenses for the project
- Environmental Category:
 - Do not achieve the emission target for any reason, in particular the climate risks that could force the usage of traditional deliveries and hence lose the benefits generated from green deliveries.
- Social Category:
 - Loss of reputation due to not respect the safety for workers, especially for employees that will deal with cargo-bikes deliveries.
 - Do not achieve the minimum critical mass of early adopters required for the product launch
- Governance Risk:
 - Do not be eligible to receive tax reductions and being not compliant in national laws in emissions

During the computation of the Risk Register, it emerged that there are different processes involved (whole development phase, Logistic & Deliveries, Marketing, Supply Chain, Management) and that two main entities are impacted at different level (Amazon Center of Turin and the Amazon Corporation). For simplicity, it has been inserted as Identification Date of the risk the 01/01/2019, since the AIA is referring to that year. Furthermore, have been identified several risk owners, such as Project Managers, Program Operation Managers, the Health and Safety Director, the Head of Marketing / Director, the Chief Financial Officer and the Chief Executive Officer.

In the Risk Register have been qualitatively evaluated the Inherent Risk, Level of Control, Probability of Occurrence and the Possible impact on Business. For each risk, it has been inserted a key risk indicator and an action to implement in order to reduce the probability of occurrence or to limit the impact on the business. In particular, the Probability and the Impact on Business will then generate an additional output, which schematize the risks into a single matrix, indicating the dangerousness of the risks. Furthermore, an estimation of resources and the time required to implement the action to reduce the relative risk has been inserted for each risk. At the end, a column containing a qualitative evaluation of the residual risk – considering the implementation of the action – has been inserted.

Category	Risk Name	Reference with Strategy goal / stakeholder issue	Process Involved	Entity Impacted	Risk Owner	Identification Date	Inherent Risk	Control	Probability	Impact on Business	KRI	Action to Implement	Resources	Time	Residual risk
Financial	Overcome the initial budget expenses or time schedule	Respect Budget Investent	Entire Development Phase	Amazon Turin Center	PM PMO	01/01/2022	High	Effective	Low	Critical	% of checkpoint respected	Organize weekly meetings	Development team	1 h per week	Medium
Environment	Do not achieve the emission target due to climate risks forcing the usage of traditional deliveries, especially during the winter	Match CO2 Reduction Target	Logistic & Deliveries	Amazon Turin Center	PM PMO	01/01/2022	Low	Partially Effective	Medium	Moderate	Target Emissions - Actual Emissions	Launch the pilot during the spring	NOT REQUIRED	6 Months	Medium
Social	Loss of reputation due to not respect the safety conditions for workers; Being responsible in Law for sinisters during working time;	Ensure Health and Safety for the project duration	Supply Chain, Deliveries, Management	Amazon Italy	Health and Safety Director	01/01/2022	Medium	Partially Effective	Low	Moderate	Number of accidents last year	Supervise health and safety	1 FTE	6 Months	Low
	Do not achieve the minimum critical mass	Spread of Amazon Green Community	Marketing Management	Amazon Turin Center	PMO Head of Marketing	01/01/2022	High	Ineffective	Medium	Critical	% of deliveries with AGC	Ad hoc Marketing campaign	15K€	2 Months	Low
Governance	Do not be eligible to relieve tax reductions and being not compliant in national laws in emissions	Being compliant with future National Law on emissions	Entire Supply Chain	Corporate	CEO CFO	01/01/2022	Medium	Partially Effective	Medium	Critical	Target Emissions - Actual Emissions	Launch CO2 Reduction Projects	Budget Established: € 1 Million	1 Year	Low

Figure 7.9: Risk Register for Amazon Green Community

By looking at the contingency action to implement related to the risk of overcoming the initial budget expenses, it has been chosen to minimize such threat with strategic weekly meetings involving the management team and key resources to catch any possible new issue while the project is ongoing. This will help the management to have the full control on the project on one hand, becoming aware as soon as the issue emerges and will empower resources' project commitment in respecting the internal deadlines. The cost associated with this solution is almost null, and it is not definitely a time-consuming task to carry out, which lowers the ending residual risk. However, if new risks will emerge, new contingency actions need to be implemented: it is important to keep the strategy register updated, so that eventually further lines can be managed.

For the environmental risk of not being able to achieve the emission target due to climate rigidity, the associated action is to launch the Pilot the spring. This minimizes the possibility that a delivery cannot be executed, and will maximize the overall pilot's success. For this action are not required any type of particular resources. However, launching the project in spring doesn't ensure the reachability of the target emissions due to uncontrollability of the climate condition, therefore the residual risk is medium.

The risk Loss of reputation due to not respecting the safety condition for workers could imply the legal responsibility in case of accident. Please notice that this risk will increase the overall existing risk in case of executing the deliveries with cargo bikes, since the employees will be in the streets. The associated action when trying to minimize the risk is to ensure safety standards through controls aimed in supervising the health and safety rules. It will involve a resource that will execute this job for a starting period of 6 months, that can be extended in case of further green deliveries out-of-season.

From the analysis it emerges that the most important risk is to not achieving the minimum critical mass from early adopters. In fact, if a sufficient number of users won't select the new

delivery system for Amazon Green Community, the pilot would be shut down, losing all the possible benefit that could derive from a massive diffusion and the sustained investment. Nevertheless, the associated action for this risk deals with Marketing: it is reasonable to think that if a proper marketing campaign, with a strong presence of local advertising is carried out, Amazon’s buyers could choose the non-polluting deliveries to receive their order, since the cost of the shipment wouldn’t change, and this would lead the residual risk to a low level.

The last risk identified associated with the Governance is to not being eligible for tax reduction which could happen in case of not matching the target emissions reduction with the green delivery introduction and the delivery phase only. So, for to reach the goal, it could be necessary to think about a budget to start R&D activities finalized to the introduction of further green improvements in the supply chain, with the scope of finding new solutions for the upstream process. In this case it is necessary to reserve a capital amount for the investment, which will then pay back in tax discounts and tax reliefs when it will be completed.

To visualize the actual risk situation before undertaking any action, the following matrix is constructed, containing and classifying the risks for their probability of occurrence and impact generated on the business

		IMPACT				
		Negligible	Minor	Moderate	High	Critical
PROBABILITY	Very High					
	High					Do not achieve the minimum critical mass
	Medium			Do not achieve the emission target forcing the usage of traditional deliveries		Do not be eligible to receive tax reductions and being not compliant in national laws in emissions
	Low			Loss of reputation due to not respect the safety conditions for workers		Overcome the initial budget expenses or time schedule
	Very Low					

Figure 8.1: Recap risk matrix for Amazon Green Community

4.5 SOLVE & SOLUTION IMPLEMENTATION

The Paragraph will be mainly divided between the Solution Canvas and a project plan with milestones, which represents checkpoints.

4.5.1 Solution Canvas

The Solution Canvas represents a recap layer that incorporates all the most relevant information about the Amazon Green Community project that derives from the 3 Layer of the TLBMC.

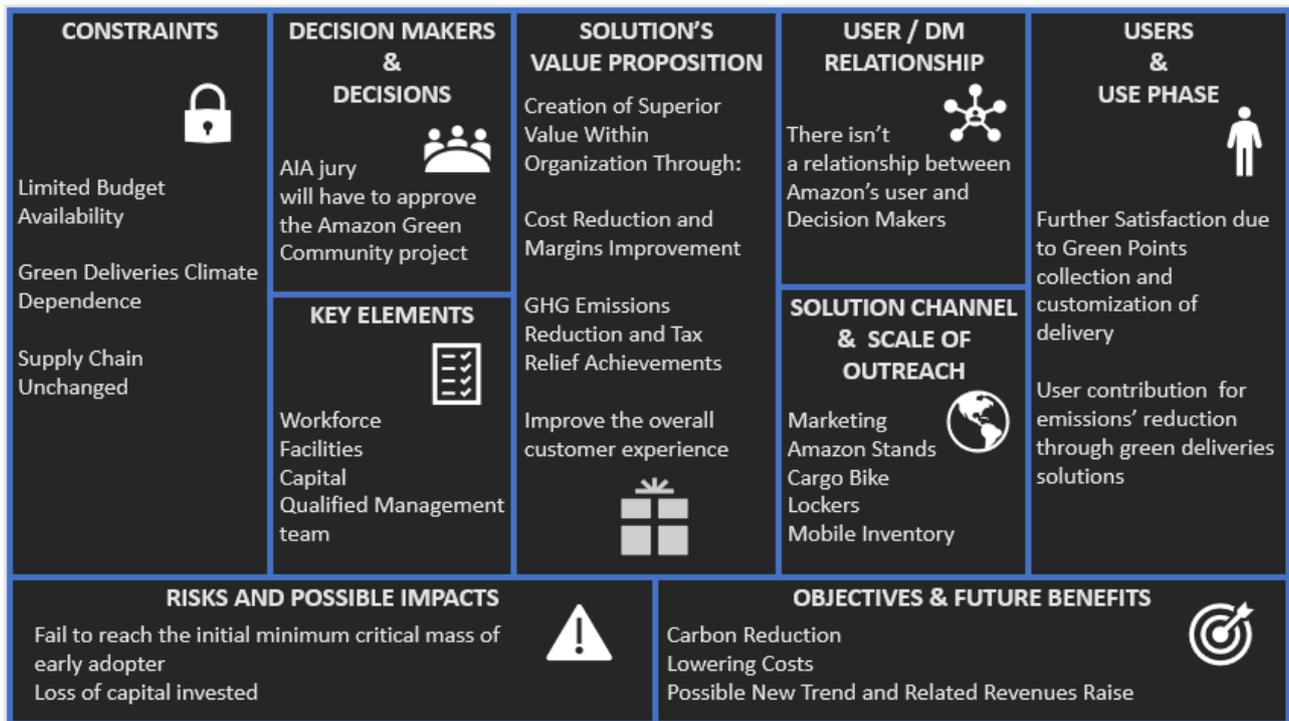


Figure 8.2: Solution Canvas for Amazon Green Community

Within the Solution's Value Proposition block there have been inserted the final reasons for which the project is done. In case of pilot's project success, Amazon Green Community will be extended to other contexts, creating a superior value within Amazon. In particular, this is done through the reduction of cost associated with deliveries that will imply margins improvement in case of delivery done directly from Amazon and not from third companies. Through the diffusion of green delivery systems, it will be possible to have a reduction of emissions directly proportional to the degree of adoption of them, and that will give the opportunity to the local Amazon Entity to be eligible for tax relief for respecting the emission's boundaries. At the end, Amazon Green Community will positively impact the overall customer experience, which will deal with a user's perception of superior service received.

The User and Use Phase block is containing relevant information about customer, which will be part of the process. He will have the possibility to choose among further delivery solutions with respect to the standard one while buying and he will have the chance to receive and collect green points in case of green deliveries. The user will be also directly involved in the delivery process in case of Amazon Locker delivery choice, which could generate more green points with respect to the other green delivery to incentivize customers.

The solution channel and scale of outreach box is listing the most important functional means of the solution through which the project will be implemented and that will be exploited to scale the final application. For this reason, has been inserted elements such as the Advertising and the Amazon Stands, Cargo Bike, Amazon Locker and Mobile Inventory which represents the emblems of the business.

Within the decision makers & decision block it has been inserted the AIA 2019 jury since they constitute the very first step from which the project needs to receive the approval. Furthermore, the jury was in charge of choosing a winner among the AIA 2019 participants and this constitute an additional reason for which it is inserted in this block. When mentioning the decision makers, it is remarkable that there isn't any kind of relationships between Decision Makers and Users.

Similarly, to the Solution Channel and Scale of Outreach box, the Key Elements block is containing activities and attributes that are functional for the project development and that, without them, it would be impossible to start the project implementation. These are the Workforce (IT developers, couriers, Inventory employees, etc), Facilities, Financial Capital and a qualified management team able to organize, coordinate and supervise.

The constraints section considers the limits on which Amazon Green Community is subject to and define the project boundary barriers. These have a different nature, e.g. the limited budget availability and the climate dependence of green deliveries, which are a pure financial limit and a climatic one, respectively controllable and uncontrollable. A superior constraint of the whole strategy solution proposed that also has to be mentioned is that it is that the Amazon Green Community is considering only the delivery phase, while the rest of Amazon's supply chain is remaining unchanged.

In the Risks and possible impacts block there have been considered the most critical issue that could determine the project's strategy failure, which are the risk of not reaching the minimum critical mass of early adopter when the solution will be delivered and therefore the risk to partially lose the capital invested. However for the risks there have been mentioned the responses actions in their dedicated part to minimize probability of occurrence and impacts.

In the Objective and Future Benefits part, it is considered the positive effects generated from the Value Proposition during the overall project. Carbon reduction, Lowering Costs and, possibly, generate a new positive trend to furtherly increase the revenues would be the definitive win for Amazon Green Community project.

4.5.2 Project Plan

It is introduced an overall plan from a high level perspective for the Amazon Green Community project, containing different milestones, each one representing a checkpoint.

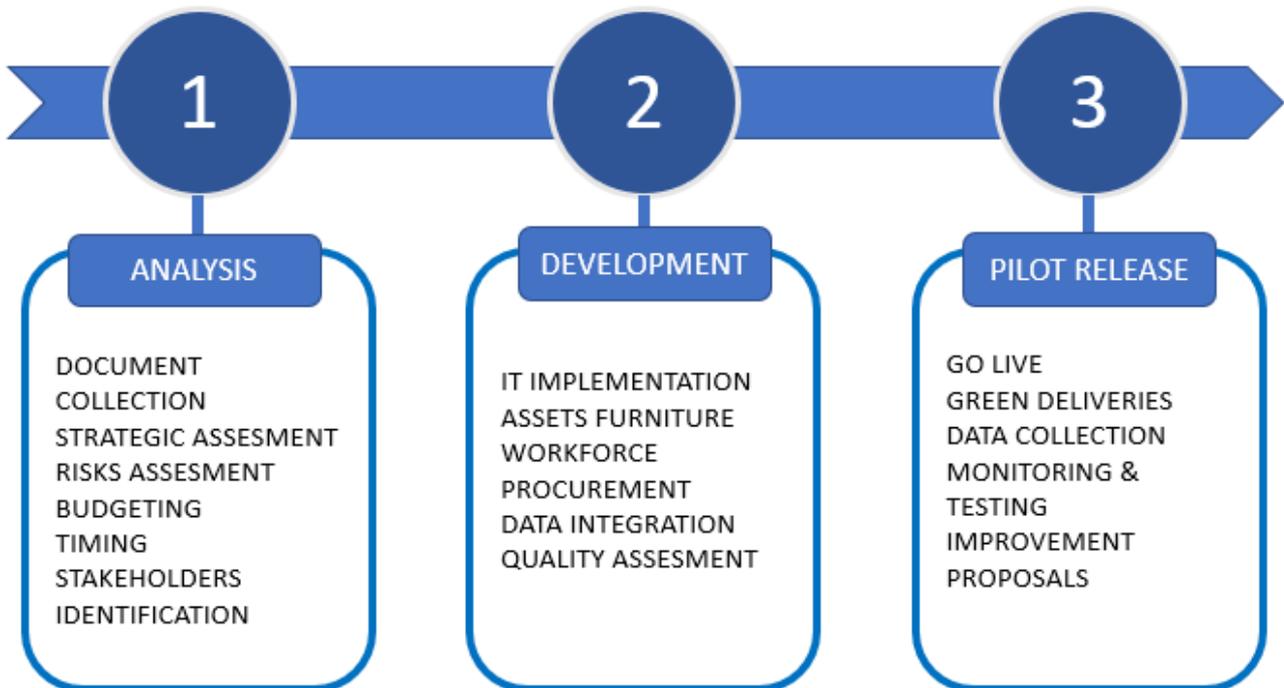


Figure 8.3: Project Roadmap with main milestones

The overall project roadmap is containing 3 milestones, which have been furtherly divided into other project’s minor checkpoints. The overall total duration will be 4 months, corresponding to the phase of Analysis (2 months), phase in which there will be provided document for the project, it will be executed the strategic assessment, the risk assessment, the budget and timing evaluation and the stakeholder identification. Also, there will be identified project team members. Once these activities will be carried out, the Development Phase (2 months) will start: it will involve directly the IT side for the implementation, the management team for the asset’s furniture and the workforce procurement. The IT team will also perform a data integration about the innovations introduced within Amazon original platform, which will be executed in a testing / development IT environment and then moved into the real working system. Once the Data integration phase will be completed, it will start the quality assessment to test the Amazon Green Community features on the Amazon’s platform. If all the tasks will be executed correctly and in time, there will be the Pilot Release

phase consisting in the Go Live, so that users will be able to execute the entire shopping process and receive the order via green deliveries. With it, it will be executed a data collection to evaluate trends and measure the Amazon Green Deliveries performances: this phase is also associated with the monitoring and testing, in which there will be declared the effective reductions generated by the green deliveries. Furthermore, there will be room for possible improvements of the case, where needed.

5 Conclusions

In this thesis work it has been analyzed the currently version in use for the GUEST methodology in each phase and it has been proposed a new version which incorporates the main important features and purposes of the traditional one. The additional functionalities brought in the new proposal for the enhancement version of GUEST methodology add further value to the overall methodology and allows to explore and discover new area that the traditional methodology is jointly considering or not considering at all. The tools used that have been somehow updated (e.g., PESTLE, SWOT, Multiple Social Business Network etc.) provide a wider perspective of assessment in the starting phase of the methodology, but the most important introduction deals with the introduction of the 3 registers, namely the Goal, Stakeholder and Risk Registers, which connect the points within the methodology's steps and drive coherently the entire process.

As a confirmation of what discussed up to now, it is possible to appreciate – hopefully – the additional contribution that the enhancement proposal provides and that fund application in this thesis work on the Amazon Innovation Award case. There, emerged sections that were not covered from the original version such as the two, environmental and social layer, of the Triple Layer Business Model Canvas and it was possible to deep dive into single managerial macro steps through the usage of the 3 registers, which allowed to distinguish and identify the ultimate goal, manage stakeholders and manage risks.

Accordingly to the candidate, the main actual limit of the GUEST methodology is represented by the necessity to execute the entire procedure “manually”, by means of several separated tools and that are not integrated into a single, unique digital box. Therefore, a possible point of future improvement can be to digitalize the procedure into a software for the end-to-end process, so that if a single company will use the GUEST for different projects the overall manageability will improve and could lead to a more flexible process.

On top of the additional features provided to the methodology, with particular reference on topics dealing with the environment and social backgrounds, the digitalization of the GUEST methodology would represent a potential valuable outcome with a huge market window for the commercialization for private companies and public entities .

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