Referential Strategic Socioeconomic Business Model, to Increase Competitiveness by Sustainable Development of Amazon Forest

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Abstract

This master's thesis exposes an opportunity to take advantage of potentialities and problems, to develop skills, competitiveness, and learn how to be sustainably using the great natural resources of Perú.

Research to define the SSSBM, integrated various tools, begun defining the purpose, follow by Conceptual, and Logical Framework, of objectives and results to achieve. Applies CANVAS, QFD and CUPA Management Cycle, for maximize value Hunt and Benefits, by cross evaluation of What's? requirements, with How´s? of technical proposals. Product and business Life Cycle with Checkland to Analyzing contexts, identifying stake holders, worldviews, structured and unstructured situations, potentialities and environmental limitations. BSC to balance strategic perspectives of Planet, Person, Processes and Products. TPS, Lean and ToC, for continuous improvement of the value chain of processes, products, services, businesses and innovations.

Adapting Throughput Accounting and reviewing Concepts of Marginal Performance, Marginal Benefits, and Consumption or Marginal Investment. A Quantitative method be exposed, allowing direct measurement and comparison of Competitiveness and Productivity of all Processes, through a Marginal Return Index. Thus, quantifying the Value and Benefits, of the Marginal Consumption of Resources, Maximizing the Marginal Benefit of Consuming Natural Resources, also Minimizing the Drainage with Negative Impacts to the Planet.

Adoption of Referential SSSBM will sustainable develop society, Amazon forest and increase competitiveness, for the creation of value and benefits for all, together with the companies and institutions related to it. Result Peruvians and planet will be Benefit

Keywords

Strategic Sustainable Socioeconomic Business Model, Sustainable Amazonian Development, Socioeconomic Competitiveness, Socioeconomic Value Creation , ToC & TPS.

1. Introduction (12 font)

The facts show that an economy based on extraction can generate a lot of economic income in the short term, but in the medium and long term, generate depredation of the forest, social problems, poverty and underdevelopment, with continuous deforestation of natural forests, and increasing loss of wealth of natural resources, consequently, as we can see Figure: 1.

This same model is the one that prevails in the 21st century, because of that, the world has been experiencing crisis in many fronts, a systemic collapse, which imposes a challenge on humanity, for a global reset. In this sense, (Gomà R., 2022) Exposes on Policies of proximity, urban collective action and construction of the common, at the XV AECPA Congress. On the other hand, there are other initiatives to advance Climate Action (Global Pact Red Chile, 2020), through a global pact with 17 SDGs (Sustainable Development Goals), for the sustainability of the planet.

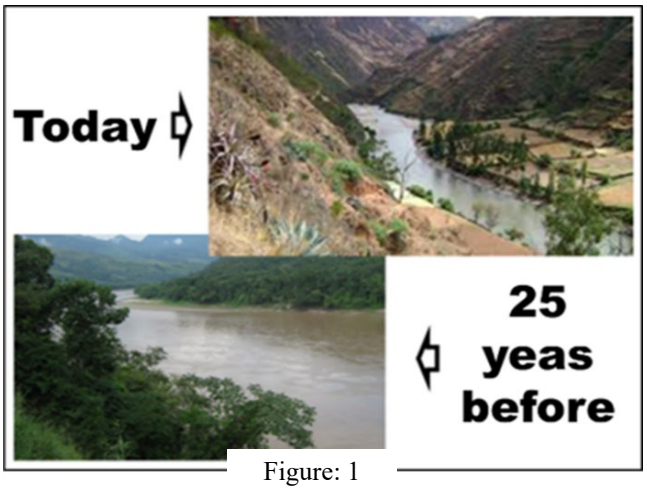


Figure: 1

That looks linke too many objectives, dispersing the efforts, in a set of chaotic initiatives, apparently without a clearly and precisely strategy. with very low effectiveness, to impacting the key causes of those SDGs. Because the strategy was to generate any type of contribution around those goals. Now we are living consequences, of a catastrophic systemic collapse, configured, by many crises simultaneously, follow by critical negative impacts (Figure: 3), such as global warming, pollution of seas and rivers, depredation and degradation of the planet's natural resources, grouped as objectives in the 17 SDGs

In that sense, referential SSSBM (Strategic Socioeconomic Sustainably Business Model), allows us to focus all efforts strategically on the key factors, to achieve the expected results.

1.1. Objectives

Expose and promote the referential SSSBM (Strategic Socioeconomic Sustainably Business Model), and the method if formulation and quantification of the Prosses, Benefits, Value Created and his impacts in competitiveness. By contrasting simulated impacts results, prospective and projective primary and secondary information of the current business model

2. Literature Review

In this sense, the paper on Strategic Foresight by (Indacochea A., 2019) is the key methodology to identify that desired future scenario, which must be empowered by all those who will impact, to act together in the present, taking into account the situations and potentials available in reality, to build what is needed, which leads to achieving that desired future.

In this sense, research carried out by (García-Madurga, M.A., Esteban-Navarro, M.A., 2020), "A Project Management Approach to Competitive Intelligence". Exposes and concludes that in project management, methodologies such as WBS, CPM, PERT, PMBOK and PMI. It has a great gap in terms of competitive intelligence, they do not contain appropriate methods to evaluate, identify and capture the strategic information on the key and critical aspects of Projects. In reality, all these instruments are to manage the deployment, implementation and start-up of projects, with clearly defined purposes. But they are not to evaluate the strategic competitiveness of projects and proposals, for Conception, Design and Development, that lead to generate the necessary changes to achieve the Purpose, and expected results, through a sustainable process for the planet and with benefits for all. that it intends to impact.

As a case study, it was applied to the Strategic Competitiveness for sustainably manage of the Amazon, exploring how to rescue and adapt to 21st century, the Inca concepts, of the performance and operation system with Tambos exposed by (Murra J. 1975), in his book "Economic and political formations of the Andean world". Those who had a mode of ecological, technological, economic and scientific management, which empowers people, to achieve Self-sustainability, Surpluses and Benefits, with positive impacts and in synergy with the planet.

In the same sense, proposals of (Estarelles P., Sagula J., 2007) "Proactive decisional model in ecological systems (MODEPEC)", are close to that proactive and inclusive model of the Incas, which empowered people to achieve an existence in harmony, balance and sustainability with Pachamama: and the planet (Figure: 11).

3. Methods

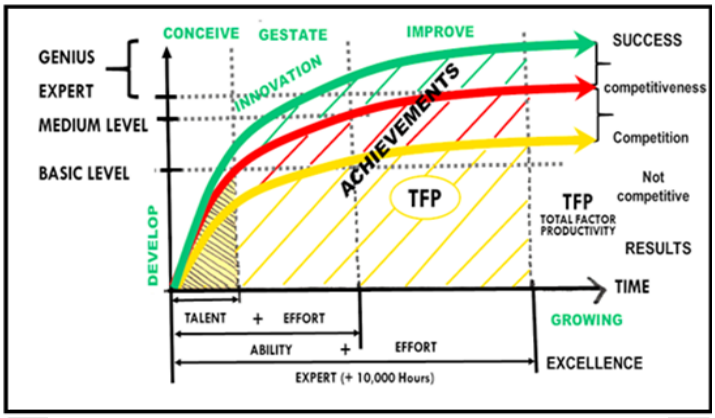
A literature review was carried out to define a Conceptual, Methodological and Operational Framework that integrates Strategic Sustainably Business Model (SSBM, Figure: 5), Logical Framework, (LF, Figure: 6 and 8), Quality Function Development (QFD, Figure: 7) and the management cycle Count, Understand, Plan, Act (CUPA, Figure: 7) to evaluate and enhance the competitiveness to capture or hunt for the value in the ATA System, improve positive and

mitigate or transform the negative impacts, generated by the Carbon Footprint of the processes, on the the planet (Figure:10 and 11).

QFD (Figure: 7) is a systematic and rigorous methodology that, through a matrix development model of survey results, following the Management Cycle CUPA (Count, Understand, Plan, Act), quantifies and seeks to understand, the voice of the users of the What? requirement or needs, and crosses them with the How?, of technical proposals, the voice of experts, to make decisions and Plan the Strategically appropriate Action, in the stages of design and Conception, Management and Operation.

When combined with the LF, it becomes a powerful strategic instrument, to act transversally and from different perspectives, on the key factors (essential) determined and critical (indispensable) at your opportunity. If it is also used, combined as a deployment instrument, successful results will be assured.

3.1. Strategic Competitiveness for Sustainable Management



Source: Own elaboration adapted from TP Wright (1936)

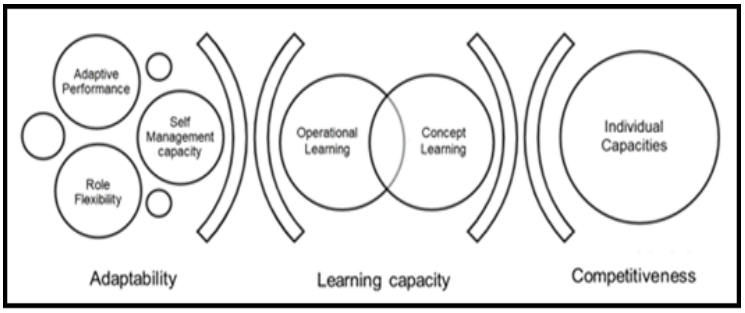
Figure: 2, Competitiveness and Competition

Competitiveness is relative, as (Jinyu Zhou, 2021) says, in "Statistical Research on the Development of Rural Tourism Economy Industry under the Background of Big Data", also indicate that it is complex due to the multiple related factors that interact with competitiveness.

Competitiveness is the power or capacity to face, adapt, overcome and/or adapt to the situations of the context with which one interacts. (Lu J. 2018). As seen graphically in Figure: 2, 3 and 4.

Figure 2 is based on the learning curve "S" (Wright), in it we can appreciate the difference between various situations of Competition and the effect of Competitiveness. In this sense, conceptually, competition is a contest of skills, it should not be confused with wars, because war is a serious matter, there are deaths, nothing is worth and everything costs.

That is why a competitor should never be considered a enemy, on the contrary, it should be considered a strategic ally that empowers and inspires to excel. In that sense, Competitiveness is the ability to overcome oneself, in the context situations in which exists.

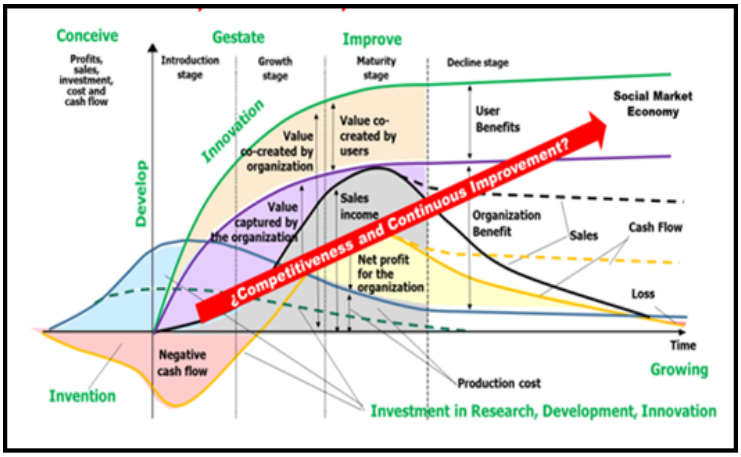


Source: Own elaboration, adapted from Abarca Y. and Barreto. (2020), Mewman & Chaharbaghi (2000), Kim (1998)

Figure: 3, Learning Capacity and Competitiveness

In this sense, competitiveness should not be understood as the ability to overcome any contender, but as the ability to overcome oneself (learn). That is why it makes sense by applying the learning curve and life cycle of Figure: 2, 3 and 4.

Competitiveness is a dynamic capacity that is learned, developed and improved with practice and experience. In this sense, what was investigated by (Sánchez, Y. A., & Rivera, U. B., 2021) on the Absorption capacity of knowledge, learning and information technologies in organizations: state of the art and evolution of research (Figure 3). However, conceptually, absorption capacity is more related to consumption, in that sense, conceptually, the capacity for learning or absorption, are factors more closely related to competitiveness´. This makes much more sense in the learning process, the capacity for absorption or learning. It should be noted that the ability to learn is directly correlated with competitiveness. Because it is the ability to adapt and learn by interacting with the environment.



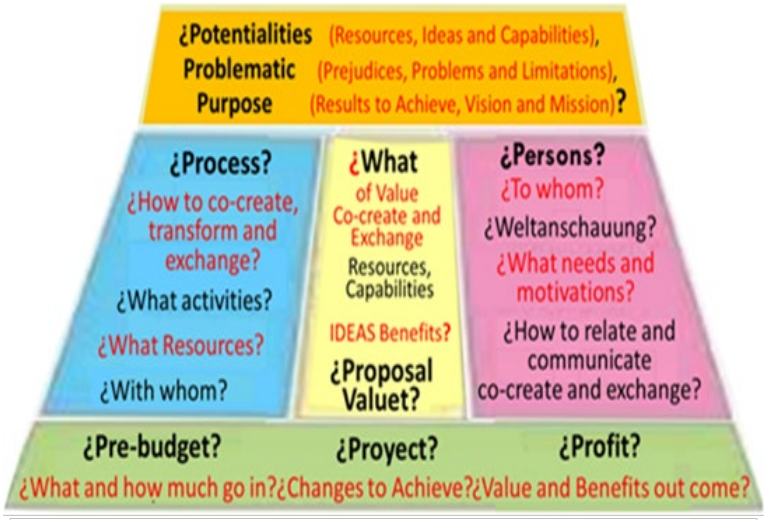
Source: Own elaboration, adapted from R. Vernon (1966), E. Rogers (1976)

Figure: 4, Competitiveness and Life Cycle of Products, Services and Businesses

That is why in his research (Ömürgönülflen M., Eryi¤it C., Özkan-Tektafl Ö., Soysal M., 2020). On the improvement of capacities in relation to education, "Enhancing the Quality of a Higher Education Course: Quality Function Deployment and Kano Model Integration", In the same sense, the learning process. It consists of four phases: Acquisition, Assimilation, Transformation and Exploitation. In addition, the ability to Learn depends on the talent to absorb and/or adapt (Figure 3), with experience and intelligence:

- The operational is by action and experience.
- The conceptual by deduction or reasoning.

Another aspect of competitiveness is investigated by (Nahuat-Román B., Rodríguez-Vargas M., Gómez de la Fuente M., 2021). On the mediating role of absorptive capacity in the relationship between intellectual capital and innovation in higher education institutes in southern Tamaulipas. As a conclusion, we draw this relevant excerpt "The repercussions of identifying the drivers of innovation are incalculable if one considers that much of the competitiveness that companies require stems, in large part, from the formal education received by their human resources.



Source: Own elaboration Adapted from Osterwalder (2004)

Figure: 5, The 9 "P" Keys Strategic Sustainable Business Model for Competitiveness Management

This is how he contributes (Jinyu Zhou 2021) with "Statistical Research on the Development of Rural Tourism Economy Industry under the Background of Big Data", by defining a model to achieve resonance or complementation, with other factors such as infrastructure or services. That lead to improve the benefits of rural tourism. Using a model, it explores the application of big data to determine which factors come into resonance and/or enhance tourism activity. Methodology used to evaluate, complements in infrastructures or services, among others.

Regarding the importance of ICT (Information Communication Technology) in the competitiveness for SSBM (Strategic Sustainable Business Model), the thesis of (De la Cruz Maldonado, 2019) is valuable. Influence of ICT capabilities on organizational performance. Although his research is from Mexico, it is about the influence on the organizational performance of the SSBM, and the results, mainly correlated with the ICT infrastructure, rather than with human capital.

Another perspective of the same "S" curve is the life cycle Figure: 4 (Lu J. 2018 thesis). In it we can appreciate the value of co-creation between suppliers and customers. Where each one generates its own value and/or marginal benefits, as a product of those exchanges, and each one must benefit, capturing and sharing parts of that co-created value. Within which, competitiveness is the determinant of the ability to evolve, develop and improve in that context.

The research carried out on the business of dry ports, (Jeevan, Aswin, Munirah, Zaideena, Haqimin, Salleh Rosni, 2021) "Reconnoitering the contributions of dry ports on the regional development in Malaysia". It serves to understand the role of the various agents that interact and the value of the various infrastructures that need to be implemented, as

well as the role of private and public investment, to invest in the implementation of more dry ports. Experience that can be extrapolated to another type of infrastructure or activity in other businesses

PROBLEMS	OBJECTIVES	HYPOTHESIS	DIMENSIONS	VARIABLES / INDICATORS
¿Problematic?	¿Purpose?	¿Proposal?	¿Reality?	Independent: The Resources, Prices and Costs; Potentialities, Problematics, Purposes, Opportunities, Alternatives; RESULT, VISION, MISSION; ATA SYSTEM
¿General and Central Problem?	¿General and Central Objectives?	¿General and Central Hypothesis?	¿Scenarios?	
¿Specific Key Issues?	¿Specific objectives?	Specific Hypotheses	¿Planet? ¿Persons? ¿Process?	Dependents: Competitiveness to Create and Exchange, Value and Benefits Sustainably; Ability to Develop, Innovate, Grow. The Process of Develop, Innovate, Grow.; Sustainable Development, Innovation, Entrepreneurship.
¿Critical Issues?	¿Indispensable Timely Actions?	¿Results to Achieve?	¿Profit?	People, Proposal, Process, Profit, Budget, Project.; Marginal investment, Operating Investment, Marginal and Net Benefits

Fuente: Manual de Proyectos BID (2004)
Elaboración Propia

Source: Own elaboration, adapted from IDB Project Manual (1990)

Figure: 6, Logical Framework for Competitiveness and Sustainably Manage

In this sense (Valdés-Sao M.; Leyva-Martínez A., 2020), he proposes a methodological procedure for the diagnosis of technological capabilities in companies. However, it is basically an internal technology audit.

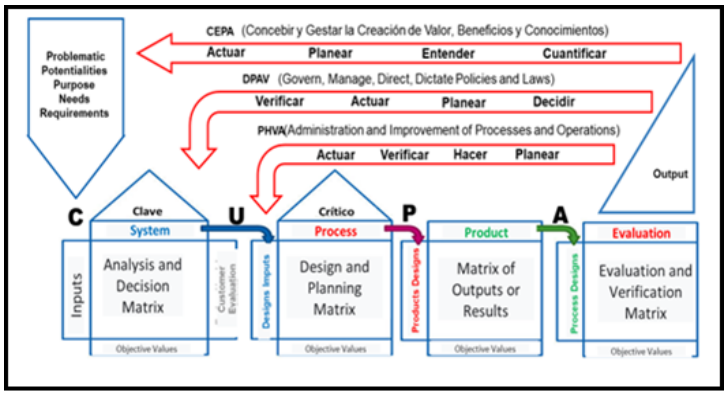
Strategic competitiveness of a company or organization is measured in relation to its internal strengths and weaknesses, with respect to the key success factors of the sector and business activity. That define their capabilities to respond and sustain themselves in the various challenges that the activity or business requires. In this sense, the evaluation of the Strategic Competitiveness for Sustainability is defined and aligned with the key "9P" (Figure: 5) of the Strategic Sustainably Business Models (SSBM), in order to sustainably capture all the value and Marginal Benefits of this activity.

Assessing the Competitiveness is to measure the effectiveness with which it acts, against the context that is faced. Strategic will be, the effectiveness with which it invests capabilities and available resources or those that can be created, to act on what is key and critical at the appropriate time, in that same sense. It will be sustainable, to the extent that this process does not negatively impact the Planet, or better yet, contribute to its regeneration.

3.2. QFD with CUPA and LF

QFD (Quality Function Development), with Management Cycle CUPA (Figure: 7), Applied to SSBM (Figure: 5) and LF (Figure: 6 and 8), systematic evaluation procedure, to determine key strategic objectives, for planning strategic actions (Figure: 5, 6, 7 and 8), in highly complex taskes, where there are various phases associated with multiple proposals for solutions. and various variables and alternatives, all framed in environmental conditions that are hart to define very clearly.

In the "IDB Project Manual" (IDB, 2004), the projects begin with the Strategic LF (Logical Framework, Figure: 6 and 8, Thesis Lu J., 2022), the definition of Purpuse and the end, and seeking to exploit potentialities, to solve the problematic. Going through identifying in the problem, the root causes of greatest impact, to define what to change? And what to change towards? In addition, additional effort is required to break the inertia of how to generate those changes? dividing the General Problem into Central and Specific, identifying and prioritizing the key, in specific strategic objectives, to act on the causes or critical factors, which compose it. With necessary activities, indicators and means of verification, of Progress and Achievements. In addition, define the roles, the value proposition and benefits of all those impacted by the proposal.



Source: Own elaboration, adapted from Hauser and Claug (1988)

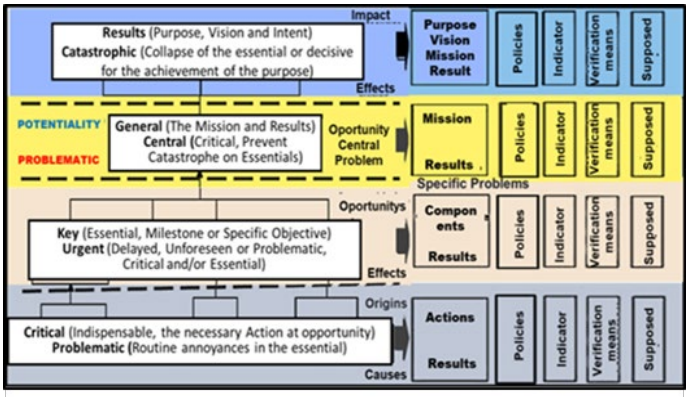
Figure: 7. QFD with CUPA to Maximize Value Hunting

In this sense, what is proposed by (Ginting R., Hidayati J., Siregar I., 2018), of an "Integrating Kano's Model into Quality Function Deployment for Product Design: A Comprehensive Review", emphasizes the importance of knowing the voice of the customer. It is necessary to point out that every system has internal and external clients. In addition,

in this case, the client is the users and not only those who pay to satisfy their requirements or desires. It is about knowing their needs, problems and potentialities, to obtain answers to the set of problems, which affects all people and actors that impact the system, in order to benefit them with what they really need. Regardless of whether it satisfies, your individual wishes. Trying to maximize the benefit and value for all who impact the system. That is, to the entire Society and the planet.

Applying LF (Figure 6 and 8) and QFD with CUPA (Figure: 7) to define strategic competitiveness requirement and technical proposals, is a powerful and key instrument, in all phases, when designing, projecting, conceiving, managing and improving processes. Because it articulates and integrates all the key and critical necessary actions, additionally KPIs (indicators) are established for follow-up and decision-making in operations. To maximize the capture or hunt of value, benefit and profit.

The QFD with CUPA (Figure: 7) methodology was applied in the identification and tracking of the needs, problems and potentialities of everything that is projected to impact with changes and improvements. Together with the LF (Figure 4, 5, 7) the Purpose, the General and Specific Objectives and Actions are defined, in response to essential key considerations, to act on essential aspects, which are critical over time, in the Key fields: People, Planet, Processes and Products. That lead to maximizing the Profit in Marginal Benefits, results of a Marginal Investment Budget, of marginal amounts of resources, where the negative impacts are sustainable or better yet, are transformed into positive ones and promoters of the regeneration of the planet.



Source: Own elaboration, adapted from IDB Project Manual (1990)

Figure: 8, Strategic Logical Framework for Achieving Key Results

Once the Purpose and End have been defined, they prospectively evaluate various scenarios. Through the House of Quality, in various phases to maximize the Hunt for Value, a total of 4 that allowed us to reach the indicator KPIs, as shown in Figure 6 and 7, the procedure developed to hunt for value and maximize the capture of the potential value of the proposal.

In that same sense, the QFD presented by (Mazur, G., 2008). "Delighting Customers with Quality Function Deployment Voice of Customer meets Voice of Process", applied to the strategic research planning process following the Strategic LF (Figure: 5, 6 and 7), but modifications, such as what was proposed (Chen, Bullington , 1993) in each of the four phases of the QFD process, where the matrix of user or customer requirements must translate the true needs and problems of all those who are impacted. from the initial planning stage to the fourth phase of activity control that makes up the strategic planning process.

3.3. Conceptual and Operational Framework for Strategic Competitiveness and Sustainably

Manage the Conceptual Framework, proposed, allows the integration of Theoretical bases of various disciplines, in a unified Methodological and Operational Framework, which are normally managed in isolation, to Conceive, Manage and Improve, Innovations and Developments competitively, in synergy, harmony and sustainably, between Society and the Planet.

Key = Essential to start

Critical = Indispensable in time

Logical Framework (Matrix) of the Strategic Plan, is a synoptic table, where the logic of the continuous actions (Objectives) is plotted, to achieve the strategic scenarios, as desired or favorable products (results). In this sense, in the LF, each Purpose corresponds to an Objective, at various levels (General and Specific and Actions), which must lead to an End (Result).

Business, should be understood as a way to develop, create and exchange recurrently, reciprocally and symmetrically benefits.

SSBM (Strategic Sustainable Business Model), It is a synoptic table, where 9 strategic key "P" factor (Figure: 5) are defined.

Potentiality, It is the resource, capacity or Problem that becomes an opportunity to take advantage of solving, exploiting and/or learning, to create and exchange value and marginal benefits.

Purposes, describes the Vision and intention of the Mission, as continuous action, to achieve the desirable scenario as a result.

Proposal with use value and benefits, for the diverse needs of the diverse groups of users and beneficiaries.

People, the various user and beneficiary groups, ways of relating, communicating and exchanging value and benefits.

Process, describes the action of converting inputs into outputs (Figure 9), activities, resources, allies and key capabilities. Applying the concepts based on the "DNA Lean Philosophy and TOC for Develop, Innovate and Improve Processes" proposed in (Lu-Chang-Say J., Lu-Chang-Say E., Zuloaga-Rotta L., & Zarate-Otarola B., 2018), moving away from the traditional cost accounting model Profit, income, value and tangible and intangible benefits, which are created. Budget, detail of the amount of all the resources to be invested, to achieve the key (essential), critical (indispensable in the type) results and the expected products.

Project, description of the change to be generated and the plan to achieve it (Figure: 5. 6 and 8). Objective, Mission or Continuous Action to achieve the result. Example: ATA System, for the sustainability of the Amazon. Hypothesis, End or Proposed result. The goal is described in the Infinitive. Example: Tambo Village System in the Amazon. Quality is marginal, it must only comply, satisfying the client, with the essential or critical minimum, at the moment that the necessary quality that satisfies it is reached, it just acquires Value, for the users. However, it has not necessarily benefited from the Superior Value of what the user really needs and that can be achieved with the same Investment (Marginal Consumption) of Resources. Value is the measure of satisfaction of each beneficiary, generating a Marginal Benefit for each use, therefore, the value grows cumulatively, for each unit consumed, becoming more valuable, in direct proportion to each unit of Marginal Benefit generated. As is the case with air and water. Resources that are priceless or very low, but are essential and valuable for life.

Marginal, it was found in the investigation that it is a concept that, although not new, is key in sustainability. Traditionally it is said that needs are unlimited and resources are scarce, but it must also be understood that the planet's capacity is limited to generate and renew natural resources. In that sense, in no case, it justifies consuming resources indiscriminately and irresponsibly to obtain benefits, what is done in practice. But a Marginal Investment is always required an amount of resource, for each unit of benefit obtained. Thus, **Marginal** in sustainability, must be understood as: "**optimal amount of investment of necessary resources**, to sustainably obtain a marginal profit unit". In the same sense, optimal quantity must be understood as neither minimum nor maximum, but rather what is absolutely necessary so that an additional unit of benefit can be obtained repetitively. In addition, it must be understood that investment should not be confused with expense or cost. Likewise, that cost is not the same as quantity, and that, if price is used as an average unit, it leads to maximizing the consumption of resources whose price tends to "S/.0.0" in the market. like air and water. It should also be noted that you can always find, create and generate proposals to maximize the capture of Marginal Benefits, for each unit of Marginal Investment.

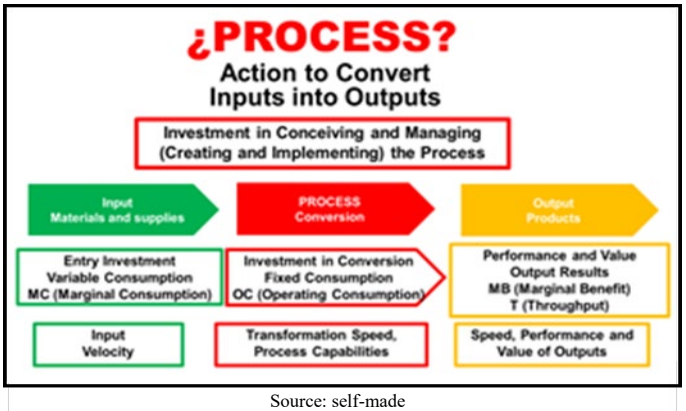


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Figure: 9, PROCESS (Act to Convert Inputs into Outputs)

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Cost or Price is the same and it increases or decreases to the equilibrium point, due to market supply and demand.

MC, Marginal Consumption or Marginal Investment, of Marginal input of resources.

OC, Operating Consumption or Operating Marginal Investment for the system to function.

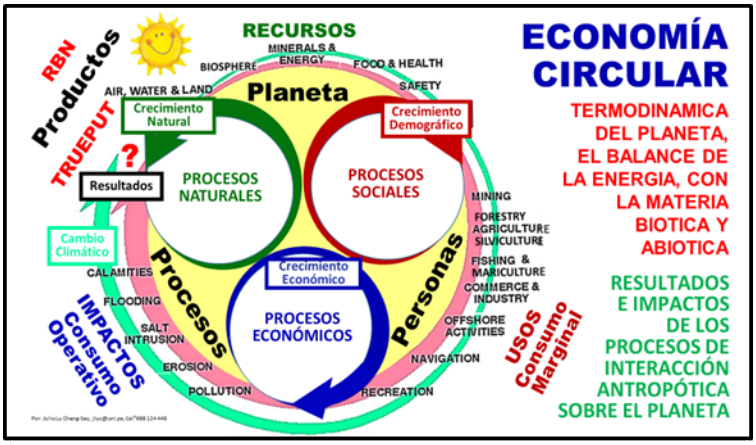
MB, Marginal Benefit, Throughput or output performance of the process. BM = Sale (Process Output Value) – CM.

NB, Net Profit = BM - OC

RBM, Marginal Benefit Yield = RBM = (BM – CM)/CO or process KPI

3.4. Impacts Evaluation and Sustainability

Carbon Footprint (Figure: 10 and 12). is the amount of CO2 emitted measured in kg, equal to 1kg Biomass or Active Living Matter = 0.330kg of fossil fuel = 4.33 kW of energy and Bioenergy. Every process consumes energy and generates a carbon footprint, which impacts t#he planet. If the energy is from fossil sources, there is emission of CO2 and thermal energy, but also the balance of living matter - energy - matter is broken. If trees are cut down, there is energy consumed, but the most serious is the reduction in the capacity to capture CO2 and consume energy from the environment, which cools the planet.



Source: Own elaboration, adapted from Forester 1995

Figure: 10, Thermodynamic Balance of Matter and Energy

Negative Impact Assessment on the Planet, People, Processes and Products (Figure10). The consumption of fossil fuels has a double negative impact, CO2 emissions and thermal energy. Electric power in Peru is only 50% renewable, for every 8.66kw consumed it generates 1kg of CO2. At the time of designing the processes, a compensation mechanism should be generated, in this sense planting trees and plants are very efficient natural mechanisms that operate alone,

Sustainability of Processes on the Planet. Figures 9 and 10, shows the application of indicators to processes on the planet, through these Productivity or Operational Performance Indicators of Processes, allow to quantify positive and negative impacts to the planet, of social, economic and natural processes.

Every process has as input, an investment of resources, a **MC** (Marginal Consumption) and **OC** (Operating Consumption) in Carbon Footprint, in any of the following forms: Living Matter (Biomass), Energy and Matter (CO2), to have an exit in **MB** (Marginal Benefits). By means of which we can determine its **RBM** (**MB** Yields), with which we can comparatively and quantitatively evaluate the sustainability and productivity of two processes of the same product or service.

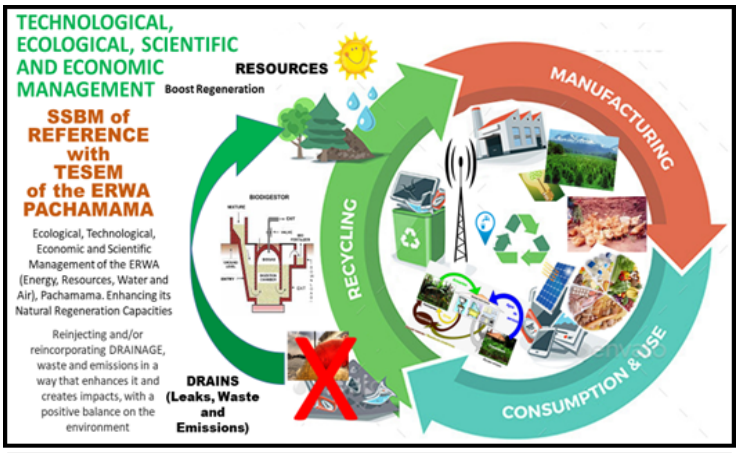
4. Proposed Improvements

4.1. ATA System to Act and Manage Sustainably

Potentialities. Through research (Figure: 5 and 9), it has been possible to understand that the Amazon is a great natural ultra-efficiency factory, which develops continuously and operates on its own, regenerating approximately 30% of the planet's oxygen, consuming 4.33 kW of energy for each kilogram of CO2 that capture of the environment, by transforming it into active living matter (biomass), thus generating 2.9 kg of oxygen, purifying 2.4 kg of water and cooling the planet (Figure12). It should be noted that this value is easily quantifiable, if we take as a basis that each hectare of forest generates 5 tons of biomass per year, not 10 as indicated in Table 1, and multiply them by the number of hectares of forest in the world. In this way we can easily understand the potential that the Amazon represents to mitigate global warming and contribute to the sustainable development of the planet

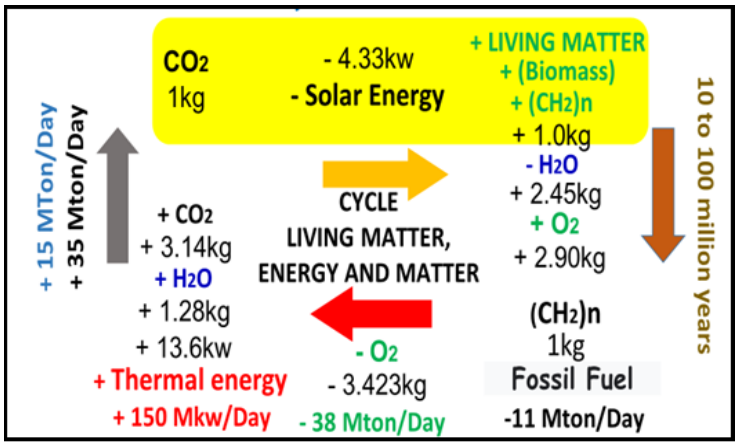
Problematic, it is a situation with multiple problems and to many questions, which in order to find a solution, need´s to be answered all. In this research, QFD was applied, crossing all the What´s? with the how´s? proposed to determine the 9 "P" Keys (Figure: 5), follow by LF (Figure: 5 and 7), in this way each proposal is systematically evaluated qualitatively, in a matrix. That allows locating his contribute to the strategy, following unified criteria, defined by the conceptual framework. Finally, the positive and negative benefits and impacts for people and the planet resulting from the process are quantitatively evaluated through the projected flow of benefits, throughout the entire life cycle of the carbon footprint (Table: 1 and 2).

ATA System (Amazonian Tambo Aldea, Figure: 11), is inspired by the Inca concept of Tambo, but rescued and adapted to the 21st century. Concept researched by (Murra J. 1975), created by the Incas to develop self-sustainable communities, which developed in synergy and balance with their habitat. The system is based on three key factors. The empowerment of all those involved, to develop their environment sustainably, through the TESEM (Figure 10) of Energy, Resources, Air, Water, in the case of the Amazon. Implement AIC (Autonomous Internet Cell) to Connect with society and the World. In addition, stop cutting down trees, to apply a 2-year exploitation cycle with pruning, thinning, harvesting, to maximize the capture of value and marginal benefits of the forest, through various instruments. As an auction of unique and different products, experiential and research tourism, it manufactures and deposits biodiversity, carbon sequestration, production of biomass, oxygen, water, bioenergy, life, etc. Value proposal. SSBM, has the potential for every Empowered Person in the world to design, conceive, manage and improve Projects, to Act sustainably for the planet, thus contributing to the Mission of this research, to mitigate global warming and sustainably develop the planet. . In addition, benefit by teaching everyone around them, to understand the value of the Amazon and what it generates for life on the planet. The key is to learn to live with it, not at its expense, to use it and develop it responsibly and sustainably, investing resources and capacities to co-create value with it, maximizing value capture and fringe benefits from the planet's resources. , not consumption them.



Source: Own elaboration adapted from Pearce and Turner 1990
Figure: 11, ATA System

Proposal Value. From the ATA System (Figure: 5 and 11), as a result of this research, this instrument was created, which seeks to create synergy and empower People, to generate networks of managers and investors in freedom, life and sustainable prosperity to Amazon. Applying a System that generates capacities and the essential conditions (keys) for the self-sustainable development of the People of a village in the Amazon. In addition, it seeks to generate bonds of commitment and reciprocity, to live and coexist, in harmony and balance, among all the inhabitants of a village and with the whole world. In addition, it generates work and employment, to carry out the necessary tasks of collecting and storing products, as well as adding value to the forest and its products, as well as marketing and auctioning unique, different and ecological services and products to the whole world. Replicable and scalable sustainable system throughout the Amazon and with some adaptations in the Andes and the coast, but also in African countries, which have a 70% rural population (Google Statistics). Adopt ATA and TESEM System (Figure 11).



Source: Own elaboration, adapted from thermochemistry table
Figure: 12, Life Cycle Carbon Footprint, Life Mater, Energy, CO_2, O_2 , Water and Bioenergy

Key Infrastructures Autonomous Internet Cell (AIC), for communication with the World and Module for the Assurance of Energy, Health, Food and Water (ASEAA) (Figure: 11), for self-subsistence. in the area, without external dependency, from that point on, all that is generated are marginal benefits.
In addition, the ATA System (Figure: 11) is an approach that does not generate a rebound effect, because everything necessary is invested in being self-sustaining and generating surpluses, betting on transforming any negative impact into positive ones, thus maximizing the generation of marginal benefits, thus eliminating the minimization and mitigation of associated negative impacts, such as those investigated by (Gonçalves-Castro C., Hofmann-Trevisan A.,

Pigosso D., Mascarenhas J., 2022. In “The rebound effect of circular economy: Definitions, mechanisms and a research diary".

4.2. Validation

Profit. (Table: 1) all the Marginal Benefits (Figure: 5 and 9) that are generated by the Marginal Investment in an ATA (Figure: 11), have been evaluated and projected. Carbon sequestration (Figure: 12) and biomass production of 24 hectares of natural forest are ensured, rescuing them from predation and degradation. The marginal benefits are at least 120 tons/year of CO_2 captured (Figure: 12), 348 tons/year of oxygen generated and 288 tons/year are permanently purified. In addition, a production of 120 tons/year ecological, organic, unique, different and high-value products (biomass) are collected from the Amazon. It should be noted that if that 24hec. of forest are cut down, all previous is lost forever, in addition, at least 2,400 tons of CO2 (Figure: 10) are emitted and all the negative impacts and effects of soil degradation that this entails. Other marginal benefits, source of work, knowledge, research, study, better quality of life for everyone in the world. Place to live, meet and enjoy. A place to invest sustainably in freedom, life and prosperity. An opportunity to generate a sustainable investment model, whose growth is mainly driven and maintained by nature.

Table 1, Sustainability Assessment of ATA System Assumptions to Project Flow of Benefits

TIAB (Increase Rate of Forest Expansion)	3	
TATA (ATA increase rate)	2	
ATA ACTION	1,000	100
Investment x ATA	50,000	
CO2 per hec ton	120	
Biomass production per hectare	10	12
Investment Ton CO2	50	
Annual footprint CO2 hec	1	
Biomass consumption hec	1	
Price Ton Biomass US$	320	
Annual Operating Cost	36,000	
Other income	24,000	

IRR of Projected Benefits

	Año	-	1	2	3	4	5	6	7	8	9	10
Economic IRR	424%	-50	112	337	1,011	3,033	9,098	27,294	81,881	245,644	736,932	2,210,795
Financial IRR	307%	-100	112	337	1,011	3,033	9,098	27,294	81,881	245,644	736,932	2,210,795
Social IRR	307%	-100	112	337	1,011	3,033	9,099	27,297	81,890	245,670	737,010	2,211,031
Environmental IRR	2853%	-0.068	2	3	9	24	70	209	623	1,868	5,601	16,801

Table 2, Projected flow of Positive Socioeconomic Impacts

Indicator \ Year	UNIT	Base Line	1	5	10
Poverty, anemia, malnutrition, illiteracy, social conflicts (intervened population)	%	40%	0	0	0
< del 1% desempleo (población intervenida)	%	5%	0	0	0
Level of education among the best in Latin America	PISA				
Annually double the hectares recovered from natural forest in the Amazon.	Hectares	0	12	10k	200k
Annually, double the number of communities, which recover at least 12 hectares of natural forest, annually	Number of Communities	0	3	100	1000
Hectares deforested in the Amazon.	Hectares	150K	12	10k	200k
Annually, at least stop emitting 10 Tons of Carbon, per hectare of forest intervened with the proposed model	Tons	0	120	100k	2M
Total income, at least US$3,000 of annual income, per hectare of forest under development intervened with the proposed business model	US$.	0	10K	8,3M	167M
Carbon Footprint Throughput (CO_2) ton.	Tons	< 0	120	100k	2M
Throughput of (US$. and Ton/kg). Biomass as a product of the forest	US$.	< 0	10K	8.3M	167M
% of attendees and participants at presentation events and workshops, of the proposed model, reference and recommend its adoption	%	0	50%	100%	100%

5. Conclusion

Purpose. Mission of this research was fulfilled, by providing knowledge, which will contribute to improving the lives of people in the world, the Problem is how to achieve the **Vision** of this research "The sustainable development of people in harmony with the planet”. Achieving SSBM (Strategic Sustainably Business Model) is a solution to the General Problem. Which was applied to the Central Problem of how? take advantage of the Potential of the Amazon to solve the Problem of mitigating global warming and contributing to the sustainable development of the planet. As a result, the ATA System was exposed. Thus, progress was made in two key milestones (SSBM and ATA System) towards the Mission to achieve the Vision of this investigation.

General problem. How to Evaluate the Referential Strategic Sustainably Business Model (SSBM)?, was resolved, starting from the Theoretical Basis of the Balance of living matter - energy - matter, throughout the Life Cycle of the carbon footprint (Figure: 12), followed by the definition of an appropriate Conceptual and Operational Framework,

which allowed the effective integration of various instruments of Research, design, management and strategic planning for development project. Such as: Logical Framework, Strategic investment Planning, Business Model, Deming Cycle, Quality Hunting, Process Throughput Accounting, IRR and NPV of projected flows. All concepts and instruments, which are generally used separately, in specialized fields of various disciplines. Through which not only is it evaluated, but above all it leads to better strategic and sustainable decisions, at all stages, that make up the design, conception, management and deployment of operations. In this way, it was possible to determine the strategic and competitive way to rescue and sustainably develop the Amazon, generating only positive impacts, with multiple Marginal Benefits, for its inhabitants, but also for all the people on the planet. Much Profit, with a Marginal Investment that leads to maximizing the capture of Sustainable Marginal Benefits, through an optimal and highly profitable Marginal EBITDA. As shown by the socioeconomic evaluation carried out, through the cash flow of value and benefits generated projected over time (Table: 1).

Central Problems, how to take advantage of the Potential of the Amazon to address the Problem of mitigating global warming and contributing to the sustainable development of the planet? SCEMS was applied as a case study, exposing the ATA System (Aldea Tambo de la Amazonia), and it was found that it is key, because it rescues the concept of tambo and ayni. of the Inca culture of reciprocity, which generated bonds of commitment to live and coexist, in harmony and balance, among all the inhabitants of a village. Lost custom in the cities, but still practiced in remote communities and areas. Cultural aspects investigated by (Murra J. 1975). That accompanied the transfer of key capacities in TSEM (Technological, Scientific, Ecological, , Economical Management) and implementation of key infrastructures, AIC and ASEAA. It addresses specific critical problems such as: Empowerment, synergy of governance and management capacities of the inhabitants. Communication with the world, technological support. Self-subsistence in remote areas. Thus, a key system is configured, where all the surpluses generated are marginal benefits for the inhabitants of the ATA (village).

Process SSBM. is a research for strategic planning, to be competitive and sustainable? Must begin by defining the SSBM and LF of the Purpose, as shown in (Figure: 5, 7 and 8), where the General and Specific Objectives and Actions are defined by the 9 key "P" (Figure: 4). In this way, the objectives and actions are aligned, in accordance with the strategic sustainable business model (reciprocal and symmetrical exchange of benefits), to strategically take advantage of the Potential, which leads to solving the Problem of the context. In the Value Proposals, it is critical that they be defined, for each group of People that the proposal impacts. It is also critical to define an instrument that generates synergy between people, as well as a relationship and communication channel with the world. Regarding the Process, it is critical to define the Activities, Capacities, Resources and Key Allies. It should be noted that the changes to be achieved with the Project have just been designed and conceived. Only from this point can progress be made with the planning to carry out the appropriate Management, which makes it a reality. For which, it is necessary to invest a marginal budget of resources. In this sense, the amount of each of the resources that must be invested, to achieve the expected results that the Project requires, must be listed. That leads to achieving the Profit, that is, the Value Income and the Marginal Benefits.

Process ATA System. It was determined that, the key activity is to recruit, empower and motivate people, to form a working and support group, to organize a network of allies, collaborators, managers and Investors in Freedom, Life and Prosperity, for which it is necessary to take into account the following key factors Activities, Allies and Capabilities. To whom key capacities will be generated and transferred so that they can identify intervention points, generate SSBM application projects with QFD and the ATA System, to act to mitigate global warming and/or for the sustainability of the planet. On the one hand, the activities should be aimed at promoting the production of biomass in the Amazon, through pruning and thinning, together with stockpiling and harvesting, to enhance the production of biomass in the Amazon (Figure: 10 and 11). on the other hand, adding value to the forest and its products, seeking to maximize the use, capture and generation of value and tangible and intangible Marginal Benefits. In addition, all negative or degrading impacts on the planet are transformed into positive ones through actions and investments, to promote the regeneration of the forest, to later collect and take advantage of it, maximizing the generation and capture of Marginal Benefits, through various initiatives, integrated with science, technology and ICT, to market and auction to the world, those ecological, organic, unique, different and high value products.

Mission for the next 10 years. Investigate how to deploy and make people in the world, replicate, adapt and scale, the ATA System, to be a reference and model to follow. In addition, teach, motivate and empower every person on the planet, SSBM concepts, instrument and its application to every area in the world. Until achieving that at least in Peru it is directed towards the sustainable development of the Amazon, and contributes to mitigating global warming.

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