

# Integrating Sustainability in Business Strategy: The Case of an Agricultural and Livestock Company

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**Abstract:** The Balanced Scorecard is a strategic communication tool focus on long term decisions supported by four perspectives alignment: learning and growth, internal processes, customers, and financial. The increased concerns regarding sustainability lead to the integration of social and environmental issues, in the so-called Sustainability Balanced Scorecard (SBSC). We aim to design the SBSC of a large Brazilian Agriculture and Livestock Company. Data was collected from interviews and documentary analysis. We characterize the sustainability perspective, analyse its integration in strategic management, and its systematization in the strategic map. Such design highlights the strategic goals and the relationship between each perspective. The sustainability perspective has a direct impact on all of the other perspectives. The clear and schematic view of the SBSC alignment empower transformation, provide competitive advantages, and benefits measurement in the long term.

**Key words:** corporative sustainable development; management; strategic alignment; sustainability balanced scorecard

**JEL codes:** M, Q

## 1. Introduction

The integration of sustainability in strategic business management is possible through a Balanced Scorecard (BSC). The sustainability features represent externalities that are not fully integrated with the market exchange processes but with social practices. However, inevitably the performance of the companies ends up being related to such features, which may become strategically relevant (Figge et al., 2002). The awareness of the strategic potential of environmental and social issues has been increased. The importance to manage, monitor, and measure the performance of environmental and social issues highlights the concern with corporate sustainability management systems (Hansen & Schaltegger, 2016). Sustainability management systems are being used such as the BSC through its extension to the Sustainability Balanced Scorecard (SBSC) (Tuğçe & Vayvay, 2016). These management tool foster organizations to contribute to sustainability issues improving fully their environmental, social and economic practices (Figge et al., 2002).

In this paper, we study how the strategic alignment of sustainability can be done with the corporate business, considering the particularities of the organizational. We also highlight the importance of the implementation of an SBSC.

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Concretely, we began with the four traditional perspectives of the BSC (namely financial perspective, customers, internal processes, and learning and growth) and integrate a sustainability perspective drawing up an SBSC for an agriculture and livestock company in Brazil. According to the Brazilian Ministry of the Environment, the overcome of incongruity between production and environmental protection is a huge challenge imposed on the rural sector (Ministry of the Environment, 2018). The dilemma presented is on the one hand to reverse the degradation of ecosystems caused by agriculture and livestock, and on the other, to promote and develop rural production in a sustainable way. For the agriculture and livestock sector to produce, many areas of forests are cleared for planting crops, pastures, and livestock. This causes huge social and particularly environmental impacts. In this sense, with this study, we intend to contribute to this field. Several issues need to be raised, addressed and directed to entrepreneurs so they can get the necessary knowledge and tools to enable conscious and responsible management of their business. This way benefits will be arising for their organization, society, economy and for the global environment.

The paper is structured in six sections. The following section presents the literature review. Then we present the method used in the study, the case study containing the design of the SBSC and the strategic map. Section five discusses the results and we end up with the conclusions in the last section.

## **2. Sustainability Balanced Scorecard**

Sustainability management relates environmental and socioeconomic actions with sustainability, putting them into action and evaluate their results (Starik & Kanashiro, 2013). Since 1995 academics began studying corporate sustainability recognizing that unsustainable business practices needed to be changed. However, many corporations were criticized for misrepresenting sustainability management as the benefits were focused only on the organizational level. Such benefits need to be extended systemically for the sustainability challenges to contribute to sustainable development and enable a radical change rather than a non-incremental (Hahn & Figge, 2016). According to Lee and Saen (2012), it is necessary to adopt corporate sustainability management practices although there is a lack of tools to support operationally such practices. Schaltegger and Burritt (2010) argue that anyone who seeks for sustainable development as a corporate goal, sooner or later, will face issues related to metrics to operationalize sustainability and related to their communication.

### **2.1 Sustainability in the Balanced Scorecard**

The BSC is a management tool that presents financial and operational performance measures, providing managers an agile and broad view of business (Kaplan & Norton, 1992). The measurement of financial factors, through income statements, balance sheets, and other traditional accounting reports, is a very limited procedure. The achievement of objectives is based only in past actions, restricting the need of present operational actions to achieve future performance. The BSC enable the achievement of leading indicators as well as lagging indicators providing efficiency and effectiveness of past actions. It combines financial and non-financial measures in the internal corporate process allowing managers to evaluate the effectiveness of strategic plans and actions (Butler, Henderson, & Raiborn, 2011).

The BSC strategic map is a systemic representation of cause and effect relationships between the several objectives. It provides a logical and comprehensive approach to understanding business strategy. It expresses the organization aimed results and paths to achieve them. Thus, the BSC became a strategic communication tool for all organization, including employees and organizational units (Kaplan & Norton, 2001).

The BSC can be an appropriate tool to manage corporate sustainability (Bieker & Waxenberger, 2002). According to Kaplan and Norton (1993), different market situations, product strategies and competitive environments require different scorecards. The business units create custom scorecards to fit their mission, strategy, technology, and culture. Schaltegger and Burritt (2010) argue that conventional corporate accounting systems need to be revised to be able to incorporate environmental and social issues and their financial effects. The Sustainability Balanced Scorecard (SBSC) has its origin in the traditional BSC, presenting a different content and architecture by integrating the three sustainability dimensions (Bieker, 2005). For Kalender and Vayvay (2016) sustainability is the fifth pillar of the BSC. Thus, for the SBSC to be implemented, it is necessary and crucial the definition and implementation of environmental, social and economic strategies for a corporate sustainability (Bieker & Waxenberger, 2002).

This approach allows the companies to contribute to sustainability issues, improving their performance and their social, environmental and economic effects, in an integrative way (Figge et al. 2002). This model conduct to develop organizational sustainability and performance through the integration of severing criteria for decision makes (Junior, Oliveira, and Helleno, 2018).

The model can also be useful for defining performance indicators for sustainability assessment models and can be integrated into multi-criteria decision methods to improve organizational sustainability and performance.

The architecture of SBSC can be done in two ways. It is possible to consider the sustainability objective into the four traditional perspectives of BSC or create a new performance perspective to consider those objectives (Figge et al., 2002; Moller & Schaltegger, 2005).

## **2.2 Integration and Architectures of SBSC**

Sustainability issues can be embedded in the BSC through the integration of environmental and social objectives into the four traditional perspectives or thought the creating a new specific perspective for sustainability management. The first option considers strategically relevant traits of sustainability in the BSC's perspectives. These traits linked and adapted to the pre-established cause and effect structure, converge to the financial perspective and allows a successful business strategy. However, it is important that these aspects have economic characteristics (Figge et al., 2002). According to Moller and Schaltegger (2005), this approach enables the integration of sustainability issues significant to the market: financial market, customers, suppliers or the labour market. In this sense, the study by Hansen and Schaltegger (2016) identifies a strictly hierarchical architecture in which all strategic objectives lead to the achievement of financial results. In this instrumental profile, managers seek profit maximization and competitiveness.

Since environmental and social issues are non-economic, they represent externalities. Firms often act beyond the economic-financial field, interacting with other aspects, such as social and legal (Figge et al., 2002). Thus, the integration of sustainability aspects absents in the market system, but strategically relevant in the BSC, will be better integrated following the second option, in which a fifth and new perspective will be created (Figge et al., 2002). Hansen and Schaltegger (2016) also present a non-hierarchical architecture in which all strategic objectives and perspectives are networked, both having their own rights, addressing diverse stakeholder interests.

According (Figge et al., 2002) the formulation of an SBSC is based in three phases: selecting the strategic business unit, identifying the environmental and social exposition of the business unit and determining the strategic relevance of environmental and social traits.

## **3. Method**

### 3.1 Characterization of the Study

We present a qualitative case study (Yin, 1994) based on the design of an SBSC for a large Brazilian agricultural and livestock company. This activity sector contributes the most significant to the Brazilian Gross Domestic Product. We choose this company as it belongs to the primary sector, with few studies in management and control field. Also, this company has the peculiarity to be one of the few companies in the agricultural sector listed on the BM & Bovespa.

### 3.2 Data Collection and Analysis

This study was conducted in 2018. The data collection for the constructions of the SBSC were based on document analysis and interviews. After the collection, the data was analysed and submitted to the company for validation and accuracy.

We started with documentary analysis based on the company's website information and on other documentation provided by the company, namely: sustainability reports, work safety reports, environmental impacts reports, among others. The company disseminating high-quality sustainability information. This analyses enabled the identification of strategically relevant aspects regarding environmental, social and economic. These documents contributed to the assessment of vision, strategy, possible strategic goals, and values. It also enables the identification of features and the main concern of the organizational essential the construction of the SBSC. Thus, we started with the construction of Kaplan and Norton's strategy translation structure (1996), identifying strategic objectives for each BSC traditional perspectives. Beside these perspectives, we consider another one for sustainability contemplating social and environmental issues. We end up with five perspectives: the financial perspective, customers, internal processes, learning and growth, and sustainability. The company's overall strategy and operational initiatives were identified and documented.

The goals and measures of performance indicators were based on the documentary analysis and simulated for the strategy translation framework to be complete.

Since the organization does not know the SBSC tool an initial research assignment was sent in order to allow them to follow the research and comprise it.

To consolidate the study, we proceed with the interviews. The interviewers were relevant managers and actors who are closely involved with research. A script was sent in advance to the interviews. The questions were pre-determined although interviews have some freedom. We conducted two interviews with an average duration of 50 minutes, to the Environmental and Safety at Work Coordinator and to the Environmental Analyst of the Company. The interviews aimed to complement and validate the SBSC and highlight other specific sustainability issues of the company.

Finally, the collect information was sent to the company for validation and accuracy. Based on the information collected a strategic map was developed, reflecting the cause and effect relationships between the five perspectives of the SBSC. The company under study has a fictitious name: AGRITERRAS. The precise number of each target is not identified instead presented as X.

## 4. Results

#### 4.1 Design AGRITERRAS' SBSC

Initially, we sought to understand what tools the company uses to communicate its objectives and goals to its employees and to measure and manage their performance. In this way, we identify that the company has a sustainability report, climate research such as performance evaluation, and communicates its strategic objectives through an internal information system, that is:

We have both company and individual goals. There is a software, a system of communication and evaluation to which the employees have access. This way they know their objectives and goals. One of the tools we use to measure our performance is the Sustainability Report and the Employee Climate Survey. We believe that the Report is a good performance measure because it follows standards that allow us to compare with other company (Environmental and Occupational Safety Coordinator).

We began to elaborate the SBSC based on its strategy, vision, and mission, according to Kaplan and Norton (2001). For AGRITERRAS the main strategy is the valorisation of their rural properties. AGRITERRAS, through its Environmental and Occupational Safety Coordinator, assumes the following mission and vision:

We hope to evolve during this year and to have new projects focusing mainly on the social issue because we realized that the organization needed to pay more attention and evolve in this way. We expect to be the largest leading platform for land development in Brazil, always respecting company values including sustainability.

One of the success factors for the formulation and implementation of a corporate sustainability strategy is the organizational culture (Engert & Baumgartner, 2016). This involves the perception of the company's employees about it. In this sense, we seek to perceive whether the organizational culture of AGRITERRAS was favourable for the formulation of an SBSC, and this is a main issue for the corporation. According to the Environmental and Occupational Safety Coordinator:

The company shares sustainability information with the public and with their collaborators. We organized lectures to present the farm's reality to the communities. In its employees show interest and are participative. In Great Place to Work's climate research, one of the most relevant issues was the proud employee have on their organization's business. So we believe our employees feel good in our company and approve our sustainability practices.

After understanding the corporate strategy, the mission, the vision and the organizational culture of AGRITERRAS, we identify the components of BSC perspectives. For each of the five perspectives (financial, customers, internal processes, learning and growth, and sustainability) we identify the critical performance factors of the company, according to Kaplan and Norton (1992).

This section based mainly in the documents analysed. They revealed to be a relevant source of data.

#### 4.2 Financial Perspective

We identified five objectives for the financial perspective: valuation of rural properties; maximizing return on investments; capital gains return; efficient allocation of capital between investment and acquisition. and minimization of risks of commodity prices.

The performance measures determined for each financial objective: the variation of the rural properties value through an independent consultant's evaluator; net profit or net income for the objective; the profit or loss obtained from the sale of rural properties; the Internal Rate of Return and the percentage of losses or gains in commodity prices through derivative transactions.

The measures of financial performance reveal whether the implementation and execution of the strategy are contributing to the improvement of the bottom line. Typical financial objectives are related to profitability, growth

and shareholder value (Kaplan & Norton, 1992).

The BSC provides a framework to organize the strategic objectives of all perspectives (Kaplan & Norton, 2001). Thus, based on the Kaplan and Norton (1996) translation of strategy into action, we present in Table 1 the translation of the strategy in operational terms for the AGRITERRAS financial perspective.

Initiatives of AGRITERRAS identified in Table 1 such as to actively manage the portfolio of rural properties and to develop the rural properties portfolio diversify by region are actions and efforts that can contribute a lot to the achievement of important goals such as increase net profit by X% and reduce losses in commodity prices by X%.

**Table 1 Organization of the Strategic Objectives, From The Financial Perspective, of AGRITERRAS**

Financial Perspective			
Objectives	Measures	Initiatives	Targets
Valuation of rural properties.	Variation of the rural properties values through an independent consultant's evaluator.	Identify, acquire, develop and exploit rural properties with high potential for recovery.	Increase property values in X%.
Maximizing return on investments.	Net profit or net income for the objective.	Actively manage the portfolio of rural properties.	Increase net profit by X%.
Capital gains return.	Profit or loss obtained from the sale of rural properties.	Selective sale of developed rural properties.	Increase in income from the sales of rural properties by X%.
Efficient allocation of capital between investment and acquisition.	Internal Rate of Return.	Acquisition of underutilized or non-productive rural properties at attractive prices and acquisition of raw materials at the lowest cost.	Increase Internal Rate of Return in X%.
Minimization of risks of commodity prices.	Percentage of losses or gains in commodity prices through derivative transactions.	Develop of the rural properties portfolio diversify by region and tilth production and use of derivative instruments.	Reduce losses in commodity prices by X%.

### 4.3 Customer Perspective

We identify as objectives of AGRITERRAS for the customer's perspective: conclude lease agreements; property sell when ideal market value achieved and be transparent with investors/costumers.

The performance measures determined for each objective from the Customer's perspective were: net sales revenue from agricultural products in leasing or farm sales and the number of communications, reports, and conferences held.

The BSC requires the translation of the mission into customer services, measuring the relevant customer's interests (Kaplan & Norton, 1992).

Table 2 discusses the operational translation of the strategy in the customer perspective. Initiatives such as improving rural properties through investments, infrastructure and technology improve the quality of products attracting customers, achieving goals such as increase in net revenue with leases in X% and increase net revenue from properties sales in X%.

### 4.4 Internal Process Perspective

In the perspective of internal processes, we identify the following objectives: implement higher value-added crops, implement excellence technology and agricultural techniques, increase operational productivity, mitigate climate and crop risks, controlling diseases and pests in crops and livestock.

The performance measures determined for each objective from the internal processes perspective were: the profitability of the implemented crops; percentage of waste related planting, harvesting and labour processes; the

number of PPR's<sup>1</sup> assigned to employees; the number of crop losses and the amount of crop and livestock losses due to diseases and pests.

**Table 2 Organization of the Strategic Objectives, From The Customers' Perspective, of AGRITERRAS**

Customer Perspective			
Objectives	Measures	Initiatives	Targets
Conclude lease agreements.	Net sales revenue from agricultural products in leasing.	Improving rural properties through investments, infrastructure, and technology.	Increase in net revenue with leases in X%.
Property sell when ideal market value achieved.	Net sales revenue from agricultural products in farm sales.		Increase net revenue from properties sales in X%.
Be transparent with investors/customers.	The number of communications, reports, and conferences held.	Disclosure objectively the results through the elaboration of webcasts and conferences.	Conducting X% conferences and webcasts, reports and communications.

According to Kaplan and Norton (1992), the definition of internal processes is very important in order to enable the achievement of customer satisfaction. Customer satisfaction and company actions derive from internal processes. Thus, managers should pay full attention to the critical internal processes since it enables the achievement of customer expectations.

**Table 3 Organization of the Strategic Objectives, From the AGRITERRAS' Internal Processes Perspective**

Internal Process Perspective			
Objectives	Measures	Initiatives	Targets
Implement higher value-added crops.	The profitability of the implemented crops.	Introduction of the agricultural in lands, development of its productivity and improve its infrastructure. Transformation of rural properties into pastures or implementation of agricultural activities, such as grains, sugar cane, pasture, and forest. Transformation of pastures into more productive agricultural properties such as sugar cane plantation. Improve rural production thought profitable agricultural activities based on culture and technology issues.	Increase crop yield in X%.
Implement excellence technology and agricultural techniques.	Percentage of waste related planting, harvesting and labour processes.	Use genetically modified and high-yielding seeds, direct seeding techniques, machinery, optimization production yield through crop rotation, irrigation, fertilizer use, and agrochemicals.	Increase the number of high-yielding seeds and techniques of excellence in X% in relation to the previous cycle.
Increase operational productivity.	Number of PPR's assigned to employees.	Hiring quality service providers, investment in modern technologies and the application of best agricultural practices.	Increase the productivity in X% in relation to the previous cycle.
Mitigate climate and crop risks.	Number of crop losses.	Geographical and productive diversification in rural properties, monitoring and anticipate severe weather conditions.	Reduce in "X% the loss harvest.
Controlling diseases and pests in crops and livestock.	Amount of crop and livestock losses due to diseases and pests.	Use of lime, fertilizers, pesticides, and seeds from local and international suppliers.	Reduce in X% the diseases and pests.

Table 3 illustrates the operational translation of the strategy in the internal processes perspective. Some initiatives of this perspective, such as the use of genetically modified and high-yielding seeds, the hiring of quality service providers, and the geographical and productive diversification of rural properties are initiatives that

<sup>1</sup> The PPR is a variable remuneration used to align the strategies to the productivity of its employees. This remuneration is only paid when predetermined goals are achieved by the employees.

improve AGRITERRAS's internal processes. Consequently, allow the achievement of goals such as the X% yield increase in relation to the previous cycle, the X% yield loss limit and the X% increase in crop yield.

#### 4.5 Learning and Growth Perspective

Regarding the learning and growth perspective several objectives were defined: region and properties infrastructures optimization; rural properties income and productivity optimization; captivate and develop people; satisfaction and loyalty of employee.

The measures identified for each objective in this perspective were: the number of infrastructures implemented; percentage of growth of products harvested and in commercialization condition; the number of sponsored scholarships and the number of qualified employees, and employee turnover rate.

According to Kaplan and Norton (1992), the goals for success are constantly changing. Intense global competition requires continuous improvements in company products and processes, and the ability to introduce brand new products with expanded capabilities.

Table 4 outlines the operational translation of the strategy in the learning and growth perspective. Initiatives from this perspective can contribute to the learning and development of employees, as well as the growth of the corporation. We choose providing training for business leaders, developing scholarships for undergraduate courses, and incentives for employees in order to obtain the best return on investments. This allows the achievement of goals such as qualifying and developing all employees and X% increase in salary or benefits package and reduction of X% of employee turnover.

**Table 4 Organization of the Strategic Objectives, From the AGRITERRAS' Learning And Growth Perspective**

Learning and Growth Perspective			
Objectives	Measures	Initiatives	Targets
Region and properties infrastructures optimization.	Number of infrastructures implemented.	Invest in the development of logistics infrastructure, in distribution centres, in storage structures and consumer zones.	Elaboration of X projects of new infrastructures.
Rural properties income and productivity optimization.	Percentage of growth of products harvested and in commercialization condition.	Investment in agricultural infrastructure, technology, and techniques.	Increased the yield and productivity of properties by X%.
Captivate and develop people.	Number of sponsored scholarships and the number of qualified employees.	Remuneration policy based on best market practices based on periodic surveys. Pay bonuses and allow employees the participation in the results of the company, for medium term. Granting of stock options to management members, for the long term, in order to retain qualified professionals. Providing, in the company, training for business leaders, developing scholarships for undergraduate, graduate and other training courses.	Qualifying and developing all employees.
Satisfaction and loyalty of employee.	Employee turnover rate.	Incentive employees in order to obtain the best return on investments and on developed projects, in order to align all interests. In a short-term, this alignment will be achieved through salaries and benefice package compatible with the market ones. Embracing benefits policy such as medical assistance, dental care, life insurance, meal voucher, food voucher, canteens, transport and housing in the respective production units, subsidies for postgraduate, MBA's and languages.	Increase in X% salary or benefits package and reduction in X% the employee turnover rate.

#### 4.6 Sustainability Perspective



The objectives identified for the sustainability perspective were: to make the entire agricultural chain sustainable; mitigate and minimize negative environmental impacts; promote the continuous improvement of the environment; safety and quality of life, and social development.

The performance measures identified for each objective are the number of environmental problems caused by the company's activities, the amount of non-recycled waste, the number of degraded areas recovered, the absence of employee due to health reasons and the number of lodging complaints, and social vulnerability rates of the regions.

For Bieker (2005) similar to the traditional BSC concept, the definition of a sustainability strategy at the corporate level seems crucial. For this, it is necessary to define the perspective objectives, the measures, and the performance indicators. The sustainability practices understanding by the company is as followed:

Sustainability is more than complying with environmental laws, is part of the business in the moment of selling and also buying lands. When buys lands we assess if the environmental and sustainability are respected. Also, we gauge if it is possible to add value both for the company and for the community, in order to bring economic and social development to the respective regions. The company and all employees, whether to buy or sell land, have always in consideration the sustainability issues, sustainability is one of the main business pillars. The company is very much attached to sustainability issues.

Table 5 contemplates the operational strategy translation in terms of the sustainability perspective. Initiatives from this perspective such as waste recycling, awareness, and involvement of employees and the local community in sustainability issues, ensuring sustainable development. This is a good way to achieve the strategic sustainability objective such as mitigating and minimizing negative environmental impacts.

**Table 5 Organization of the Strategic Objectives, From the AGRITERRAS' Sustainability Perspective**

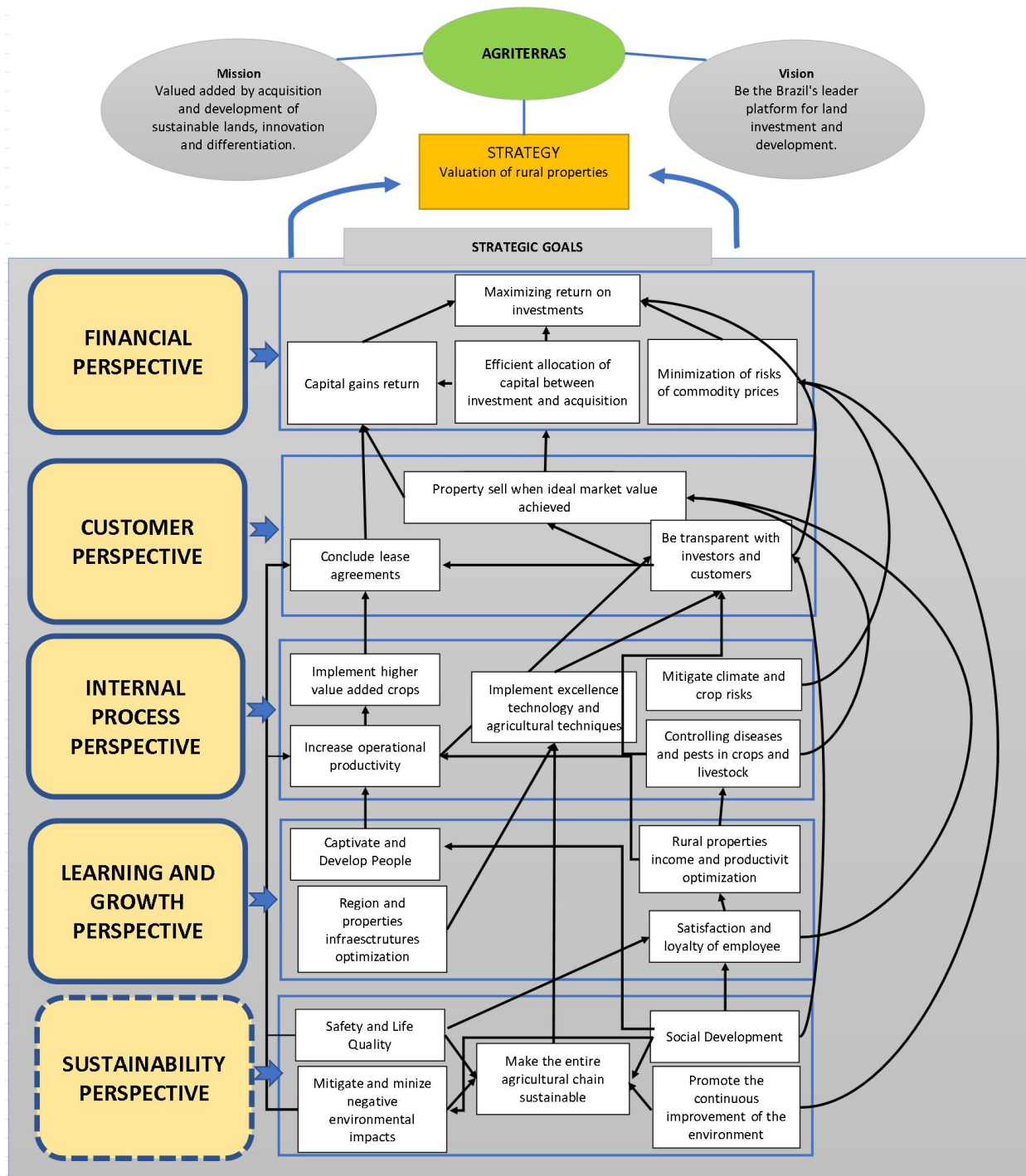
Sustainability Perspective			
Objectives	Measures	Initiatives	Targets
Make the entire agricultural chain sustainable.	Number of environmental problems caused by the company's activities.	Control and evaluate activities and services, work with governmental and non-governmental bodies and compliance with environmental legislation.	The decrease in X% of the negative environmental impacts.
Mitigate and minimize negative environmental impacts.	The amount of non-recycled waste.	Waste recycling, awareness, and involvement of employees and the local community.	Recycling X% of our waste.
Promote the continuous improvement of the environment.	The number of degraded areas recovered.	Investment in soil conservation technologies and practices such as no-tillage, crop rotation, integration system for livestock farming and institution of ecological corridors.	Investment X€ in conservation technologies and practices.
Safety and quality of life.	The absence of employee due to health reasons and the number of lodging complaints.	Follow-up with labour and social security obligations. Appropriate working conditions. Accommodation and housing. Individual safety equipment's. Health care. Dental care. Risk management.	Improvements in X% the accommodations. Investment in medical and dental care.
Social development.	Social vulnerability rates of the regions.	Dynamization of regional economies, creating employment and accommodation for the rural population. Improvements in the surroundings of properties, such as the construction of schools, the implementation of the electric network, and the creation of local jobs. Promote social actions with children and adolescents from schools in the action company area: the states of Goiás, Bahia, and Maranhão.	Promote X social projects in communities.

Following the design of an SBSC, we will identify and align strategically relevant aspects, translating the

strategy into linked objectives, and indicators (Figge et al., 2002).

#### 4.7 Strategic Map

The formulation of the vision, mission, strategy, strategic objectives, and features, and also the analysis of the relevance strategic of sustainability for AGRITERRAS were systematized in its strategic map, in Figure 1.



**Figure 1 Strategic Map of AGRITERRAS**

According to Krstić, Sekulić, and Ivanović (2014), the formulation of an SBSC can be presented graphically

through a strategic map. We can see from the below strategic map that the integration of the sustainability issues of AGRITERRAS in the BSC was made through a new (the fifth) perspective. This perspective manager the sustainability objectives. Such objectives do not present economic characteristics, however, they are strategically very relevant for the business (Figge et al., 2002). Butler, Henderson, and Raiborn (2011) also emphasise the integration of sustainability through a fifth perspective. The case study reveals that the company considers sustainability as an organizational value. Consequently, in addition to the strategic objectives identified for the four traditional perspectives of the BSC, it considered a fifth strategic objective into the perspective of sustainability, addressing environmental and social issues.

Analysing g the AGRITERRAS's strategic map, clearly and quickly we understand the cause and effect relationship between each perspective. Also, it is possible to recognise the strategic influences of sustainability among the other perspectives, corroborating the study by Bieker (2005).

Corroborating the study of Krstić, Sekulić, and Ivanović (2014) we observe that the lower levels of key success factors can boost the higher-level goals and perspectives. In this way, we can highlight these relationships in the strategic map of AGRITERRAS, for example: safety and quality of life (which is an objective of the sustainability perspective) leads to satisfaction and loyalty of employee (impacting the learning and growth perspective) and to increase operational productivity, which is part of the internal process perspective.

## 5. Discussion

The strategic alignment of sustainability to the organizational business it was possible by the identification of the strategic relevance of sustainability aspects that impact the organization. We analysed whether sustainability issues have economic characteristics and their impact on the market. The traditional BSC model presents a great potential for this linkage.

The case study reveals that the SBSC could provide to AGRITERRAS an information aggregation in a single tool. This aggregation provides the communication of the strategic objectives and goals to the employees and to the whole organization, the measure of performance in several business dimensions. Currently, the corporation uses three separate tools for a common propose: the sustainability report, the organizational climate survey, and the information system. The SBSC could integrate them.

The design of the SBSC is specific according to the particular features of the company. It is essential to take into consideration the “personality” of the corporation. Several features have to be taken into consideration such as the business strategy, the sustainability strategic, organizational values, culture and, structure, leadership involvement, the strategic planning process, among others. The company studied belong to the primary sector, therefore its activities are mainly related to environmental issues. This is a crucial issue for business operationalization, becoming strategically relevant. Already companies belonging to other sectors such as the industry and commerce sectors, have a quite different BSC. Hence, following Kaplan and Norton (1993) recommendation this BSC was developed specifically according to the “personality” of AGRITERRAS.

In addition, the case study reveals that the company has a lot of useful and strategic information scattered and dispersed through the company. This information has several formats such as public documents, reports, institutional presentations, conferences, and websites. Corroborating Kaplan and Norton (1992) arguments, the organization of such information according to the BSC structure, allow a direct and clearer understanding of the crucial factors, and helpful support for decision making for managers, employees and also for potential investors.

Hence, empowers competitive advantages and elucidates several management and investments for possible actions that otherwise were hidden. It can also highlight issues that never have been discussed before.

The results also provide evidence that there are several reasons for the design and implementation of an SBSC. It allows sustainability to be integrated and managed strategically. Thus, it allows the integration of social and environmental initiatives into the corporate financial results and the understanding of business activities impacts the internal and external environment (Lee & Saen, 2012). This study advocates the conciliation between sustainable development and economic and financial development, and most of all strategically.

## 6. Conclusions

This study relies on the SBSC, proposing one for a Brazilian company with the largest amount of agricultural land and with the aim of acquiring, develop and exploit appropriate rural properties to agricultural.

The sustainability can be aligned with the company strategic management through an SBSC. This alignment can be an enabler of transformation, an intangible asset to provide competitive advantages, and measurement of benefits in the long term.

The implementation of an SBSC leads to the operational translation of the strategy; to the organization of strategic objectives; to clarify the strategic and operational business to managers and investors; to enable the communication and understanding of the strategy, objectives and goals all over the company; to understand the strategic relevance of sustainability; the causes and effects of sustainability in the several organizational domains; and the measurement of the results follow-on the management of environmental, social and economic practices.

The particularities of the organization influence the creation of an SBSC. The organization vision, mission, values, culture, strategy and business model are individual factors that boost the design of the SBSC.

There are several reasons to implement an SBSC. This tool can be a starting point to mature sustainability and sustainable development issues and to impact meaningful not only in companies but also in society.

This study encourages further discussions related to the design, operationally and effectiveness of an SBSC. Also, it raises issues related to the strategic management, performance and sustainability in one of the most important economic sectors in Brazil – the agricultural and livestock sector.

Despite the peculiarity of each company, the presented SBSC model can attend to be a started point for other companies, properly adjusted to their features.

As limitations, we mention the shortage of studies, particularly in Brazil context. As far as we know there are no studies about SBSC in the primary sector. Having this sector, a significant weight in the national Gross Domestic Product we consider this study relevant. The study has also limitation related to the method — case study — the conclusions cannot be generalized, are specific to the studied case.

For future research, we suggest additional studies on the subject, especially in the Brazil agricultural sector. We also suggest to studied different forms of integration the sustainability in the BSC, to study the impacts of SBSCS implementation in the long term in a company and causes for the implementation to fail in order to improve the tool.

## References

- Bieker T. (2005). "Sustainability management with the balanced scorecard", in: U. Seebacher (Ed.), *Corporate Sustainability: Theoretical Perspectives and Practical Approaches*, München: Profil, pp. 121-46.
- Bieker T. and Waxenberger B. (2002). "Sustainability balanced scorecard business ethics", in: *Internacional Conference of the*

*Greening of Industry Network*, Goteborg, Suécia.

- Butler J. B., Henderson S. C. and Raiborn C. (2011). "Sustainability and the balanced scorecard: Integrating green measures into business reporting", *Management Accounting Quarterly Winter*, Vol. 12, No. 2, pp. 1-10.
- Engert S. and Baumgartner R. (2016). "Corporate sustainability strategy — Bridging the gap between formulation and implementation", *Journal of Cleaner Production*, Vol. 113, pp. 822-834.
- Figge F., Hahn T., Schaltegger S. and Wagner M. (2002). "The sustainability balanced scorecard — Linking sustainability management to business strategy", *Business Strategy and the Environment*, Vol. 11, pp. 269-284.
- Hahn Tobias and Frank Figge (2016). "Why architecture does not matter: On the fallacy of sustainability balanced scorecards", *Journal of Business Ethics*, Vol. 150, pp. 919-935.
- Hansen E. G. and Schaltegger S. (2016). "The sustainability balanced scorecard: A systematic review of architectures", *Journal of Business Ethics*, Vol. 133, No. 2, pp. 193-221.
- Junior Alaercio, Maria Oliveira and André Helleno (2018). "Sustainability evaluation model for manufacturing systems based on the correlation between triple bottom line dimensions and balanced scorecard perspectives", *Journal of Cleaner Production*, Vol. 190, pp. 84-93.
- Kalender Z. T. and O. Vayvay (2016). "The fifth pillar of the balanced scorecard: Sustainability", *Procedia – Social and Behavioral Sciences*, Vol. 235, pp. 76-83.
- Kaplan R. and Norton D. (1992). "The balanced scorecard-measures that drive performance", *Harvard Business Review*, Vol. 70, No. 1, pp. 71-79.
- Kaplan R. and Norton D. (1993). "Putting the balanced scorecard to work", *Harvard Business Review*, September, pp. 134-147.
- Kaplan R. and Norton D. (1996). *The Balanced Scorecard: Translating Strategy into Action*, Boston: Harvard Business School Press.
- Kaplan R. and Norton D. (2001). "Transforming the balanced scorecard from performance measurement to strategic management: Part I", *Accounting Horizons*, Vol. 15, No. 1, pp. 81-104.
- Krstić B., Sekulić V. and Ivanović V. (2014). "How to apply the sustainability balanced scorecard concept", *Economic Themes*, Vol. 52, No. 1, pp. 65-80.
- Lee K. and Saen R. (2012). "Measuring corporate sustainability management: A data envelopment analysis approach", *International Journal of Production Economics*, Vol. 140, No. 1, pp. 219-226.
- Ministry of the Environment and Rural Development, accessed on August 30th, 2018, available online at: <http://www.mma.gov.br/desenvolvimento-rural.html>.
- Moller A. and Schaltegger S. (2005). "The sustainability balanced scorecard as a framework for eco-efficiency analysis", *Journal of Industrial Ecology*, Vol. 9, No. 4, pp. 73-83.
- Schaltegger S. and Burritt R. L. (2010). "Sustainability accounting for companies: Catchphrase or decision support for business leaders?", *Journal of World Business*, Vol. 45, No. 4, pp. 375-384.
- Starik M. and Kanashiro P. (2013). "Toward a theory of sustainability management: Uncovering and integrating the nearly obvious", *Organization & Environment*, Vol. 26, No. 1, pp. 7-30.
- Tuğçe Zeynep and Özalp Vayvay (2016). "The fifth pillar of the balanced scorecard: Sustainability", *Procedia - Social and Behavioral Sciences*, Vol. 235, October, pp. 76-83, doi: <http://dx.doi.org/10.1016/j.sbspro.2016.11.027>.
- Yin R. (1994). *Case Study Research: Design and Methods*, Thousand Oaks: Sage Publications.