

## POLICIES AND STRATEGIES IN BUSINESS VALUE-CREATING ORGANIZATIONS

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**Abstract.** *This conceptual paper seeks to demonstrate that, just as individuals in a Social System are responsible for their own actions and behavior with respect to the other individuals in the system, organizations, as vital entities (following Beer's Viable System Model) that make up the Social System, must also necessarily be held accountable for the economic and non-economic consequences of their actions. The complex "decision-action" interaction leads the organization to behave as a cognitive entity, as a vital unitary system, that must be held "socially responsible" for its own actions, as these are produced, in turn, by its own decisions. This results in the necessity and inevitability of CSR. Specifically, the MOEST demonstrates that the action of every BVCO assumes a Corporate Governance that specifies stakeholder objectives and environmental constraints, in this way defining the various levels of CSR. The present study deals with the following topics: 1. In what sense are Business Value-Creating Organizations (BVCOs) cognitive and vital systems, and thus responsible actors in the Social System? To demonstrate this, Beer's VSM and Mella's MOEST (Organization as an Efficient System of Transformation) are used; 2. How does the interdependence among objectives, decisions and controls function? In this regard, this paper will examine in particular the role of policies and strategies in producing the management dynamics in organizations. 3. The CSR as representing a fundamental variable in the strategy of BVCOs, as corporate ethics and reputation is based on this.*

**Keywords:** *value creation; capitalistic firms; autopoietic systems; teleonomic systems; control systems; MOEST; balanced scorecard.*

### Introduction

Just as individuals acting in Social Systems are responsible for their own actions and behavior with respect to the other individuals in the system, Organizations, as vital entities, must also necessarily be held accountable for the economic and non-economic consequences of their decisions, actions and controls, which are determined by policies and strategies.

This study is based on a coherent framework built on the following guidelines:

1. The processes for the production of value are carried out by permanent production organizations, in particular Business Value-Creating Organizations (BVCO), or "capitalistic firms";
2. From an internal point of view, BVCOs are operationally-closed systems that are at the same time structurally and behaviorally coupled to the environment; they perceive disturbances such as external stimuli, process these, and act (react or pro-act) to balance the network of vital processes;
3. In this sense, BVCOs can be conceived of as "conscious cognitive systems" that link themselves to the environment through a system of processed, up-dated, and evaluated information which we can define as the representation of the external world;
4. From an external point of view, BVCOs are teleonomic systems that can continue to exist only as long as their performance as systems for the production of value is appreciated by the environment, according to a coherent system of performance indicators for the production of value (productivity, quality, economic efficiency, returns, Economic Value Added and Economic Value of the Firm).

In this framework "capitalistic firms" are BVCOs that are viewed as systems acting in a complex environment whose maximum objective is the creation of economic and financial value for their

shareholders. From an internal point of view, performance for shareholders is based on profit and the value of capital, and it is measured by a system of monetary values. Again from an internal point of view, performance must also be assessed according to non-monetary variables; for example, based on Kaplan's balanced scorecard model (see below). From an external point of view, if firms are seen as vital systems operating in the environment, then performance is perceived by external stakeholders as the capacity to produce sustainable value by means of ethical business and managerial behaviour.

In order to achieve autopoiesis and maintain the organization viable indefinitely, three particularly significant models have been proposed:

- 1) Beer's Viable System Model, which indicates the structure organizations must have in order to remain indefinitely viable;
- 2) Mella's Model of the Organization as an Efficient System of Transformation (MOEST), which points out that the main condition of vitality of organizations consists in their carrying out five parallel transformations in the search for maximum efficiency:
  - a. a *productive transformation* of factors into production, governed by productivity and by quality;
  - b. an *economic transformation* of costs and revenues into operating income, governed by prices and therefore by the market;
  - c. a *financial transformation* of capital into returns, governed by risk;
  - d. an *entrepreneurial transformation* of information into objectives and policies, specifying the levers, that is, the strategies, for controlling these;
  - e. a *managerial* (organizational) *transformation* of strategies into decisions, actions and management controls.
- 3) The model of organizations as *control systems*, in the sense that a firm must set a system of objectives for itself which is centered on its shareholders and stakeholders. These objectives can be achieved by the organization only if it acts as a system of control that produces effective strategies for carrying out a policy regarding the production of value which does not exclusively benefit the shareholders but instead concerns a vast group of stakeholders. As a result we must also broaden our notion of the production of sustainable value in order to include both social value and environmental value.

Despite the differing perspectives from which firms can be viewed, it is appropriate to introduce *capitalistic firms*, viewed as autopoietic and teleonomic business and profit-oriented BVCOs (Mella, 2005), whose *fitness* resides in their capability, or efficiency, to produce adequate levels of economic and financial values through a network of efficient processes carried out by a structure of organs (processors) joined by networks of control systems (Mella, 2014; Alter & Hage, 1993).

### **The capitalistic firm as an autopoietic and teleonomic system**

Capitalistic firms are *autopoietic systems* (Varela, 1979; Maturana & Varela, 1980; Bednarz, 1988; Luhmann, 1995) in the sense that, through their metabolic processes, they produce themselves by regenerating the network of financial and economic processes, searching for the metabolic and energy inputs in the environment which are useful for *autopoiesis* and fleeing from those which are damaging (Zeleny & Hufford, 1992; Mingers, 1994).

Defining *teleonomy* as the ability of an autopoietic system to maintain its existence by regenerating its autopoietic processes, then capitalistic firms are undoubtedly teleonomic systems, in that they maintain their own autopoiesis by carrying out cognitive processes aimed at giving significance to the environmental stimuli, translating these into information that is structured in knowledge and producing a reactive and proactive behaviour in order to search for the conditions that allow individuals to benefit, directly or indirectly, from the achievement of a common end that defines the capitalistic firms' teleology.

We can also distinguish between *endogenous* teleonomy and *exogenous* teleonomy (Monod, 1970, p.124; for an opposing view see Maturana-Varela 1988; Paetau, 1997). While *endogenous* teleonomy characterizes the internal structural dynamics of the organization, *exogenous* teleonomy characterizes its environmental dynamics.

The organization has a high endogenous teleonomy if, by developing efficient processes of *adaptation*, it continues to exist despite the unfavorable structural disturbances from the environment; it is characterized by a high exogenous teleonomy if the environment itself sets the conditions that favor its autopoiesis, and thus its lasting existence, as a unit as well as an organizational type (Toffler, 1985). In this sense the organizational activity of cognition and learning (De Geus, 1988; Senge, 2006) is necessary for the organization's teleonomy.

### The capitalistic firm as a viable system

Stafford Beer (1979, 1981, 1984) has developed a model of the firm as a viable system, which is briefly outlined in figure 1. In this now classic model based on the autopoietic and teleonomic view of organizations, Beer identifies the *minimum structure* that every organization must have in order to remain vital for a long time.

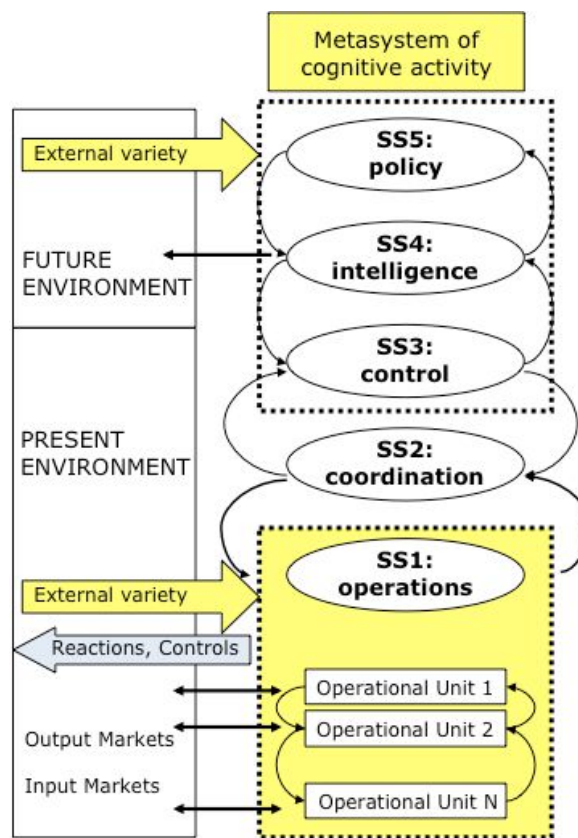


Figure 1. A synthesis of the Viable System Model

Directing the reader to Beer's books for a detailed description, here it is enough to mention that Beer directly interprets organizations and firms, when observed from the outside, as *cybernetic systems*, and thus as unitary Control Systems that include management directly in the chain of control (see below). The viable system model (VSM) assumes that in every organization five interconnected subsystems (SS) can be identified:

- SS1: OPERATIONS. These are the operational units that, by interacting with the environment, carry out the processes for which the organization was created.
- SS2: COORDINATION. To avoid any interference and conflict among the SS1s regarding the use of common resources, the SS2s must be assigned the task of coordinating the SS1s over time and space.

- SS3: CONTROL. The coordination carried out by the SS2s is necessary but not sufficient without a control over the achievement of the objectives of the SS1s. The control subsystem formulates plans and programmes that represent the objectives that the SS1 units must pursue in a coordinated manner. SS3 is connected to the subsequent SS4 and SS5s to form a higher-order subsystem that produces the organization's intelligence.
- SS4: INTELLIGENCE. The organization can survive only if it is able to observe the environment to obtain information, make forecasts and create action programmes based on foreseeable future scenarios.
- SS5: POLICY. This subsystem guarantees the unitary management of the organization by defining the policies needed to achieve the vital objectives set by the stakeholders.

### The capitalistic firm as a system of efficient transformations

The VSM illustrates the structure an organization must have to remain vital, but it does not highlight the economic and financial processes that all *capitalistic firms* – when viewed as autopoietic and teleonomic organizations – must necessarily carry out through their structures to remain vital. A specific model (in many respects parallel to the VSM) the MOEST, has been proposed by Mella (2005; 2012, 2014). The MOEST considers all *capitalistic firms* as *systems of transformation* that, in order to remain in existence over time, must carry out five interconnected vital *transformations*, each of which, operating with maximum efficiency, carries out a vital function similar to what is proposed in the VSM. Unlike the VSM, which represents organizations from the point of view of their *structural* synthesis, the MOEST sees them from a *functional* viewpoint. Moreover, the MOEST highlights the role of information and communication from and to the stakeholders, and thus the need to define the reputational and ethical spheres of organizational behavior.

The MOEST, shown in figure 2, interprets capitalistic firms as operating systems of transformation that carry out five parallel efficient transformations:

1. an efficient PRODUCTIVE TRANSFORMATION [P] of factors into production; this is a transformation of utility governed by maximum *productivity* and *quality*;
2. an efficient ECONOMIC TRANSFORMATION [E] of costs and revenues into EBIT (operating income); it is immediately clear that economic efficiency depends on productivity, which reflects productive efficiency, and on the ratio between the *average selling price* and the *average unit cost of production*, which represents *market efficiency*;
3. a FINANCIAL TRANSFORMATION [F] of risks, which transforms capital into the maximum returns and guarantees the maintenance of the firm's financial integrity; the profit organization that finances its economic processes with external capital in the form of *Equity* and *Debt*, which constitute the *Invested Capital*, becomes a *capitalistic enterprise*.
4. an ENTREPRENEURIAL TRANSFORMATION [I] whose function is to monitor the *present* and *future* environments in order to: a) identify the survival conditions and define the *maximum objectives* that will guarantee an enduring vitality; b) decide which *entrepreneurial policies* have priority in terms of the vital objectives; c) for each objective, establish the *entrepreneurial strategies* to order the most effective control levers which lead to a continual readjustment of the firm's strategic position. To carry out this function, [I] produces a continual transformation of *information* and *forecasts* into *strategic decisions*, preparing the long-term plans and programs and designing the *management control systems* that give rise to and regulate the three other transformations for the achievement of the objectives of quality, productivity, economic efficiency and profitability. This transformation is referred to as “entrepreneurial”, since it produces to the maximum extent possible the conceptual, creative and innovative activities that characterize the entrepreneurial function.
5. a MANAGERIAL (organizational) TRANSFORMATION [M] of strategies into programs that represent the operational guide for actions and management control. [M] undertakes five sub-functions: (1) it divides the vital objectives determined by [I] into operational objectives to be assigned to the organs (functions) and operational units; (2) it divides the *overall* entrepreneurial strategies drawn up by [I] into *functional* and *operational* strategies, which it assigns to the organs and operational units that carry out the “technical”

transformations, and as a consequence (3) it draws up the operational programs and budgets that serve as the *operational objectives* for the Control Systems, which are required to achieve the maximum level of productive, economic and financial efficiency; (4) it carries out the *managerial coordination* of the organs, operational units and members of the organization that together represent the engines of the “technical” transformations; (5) it decides on the *operational regulations* which oblige the controlled units (organs, units and individuals) to undertake the necessary actions to achieve the objectives.

The operational units of SS1, as described by Beer (figure 1), correspond to the units that carry out the “technical” transformations of the MOEST. The “cognitive” transformations of the MOEST, both entrepreneurial and managerial, perfectly correspond to the activities assigned to the other four sub-systems of the VSM.

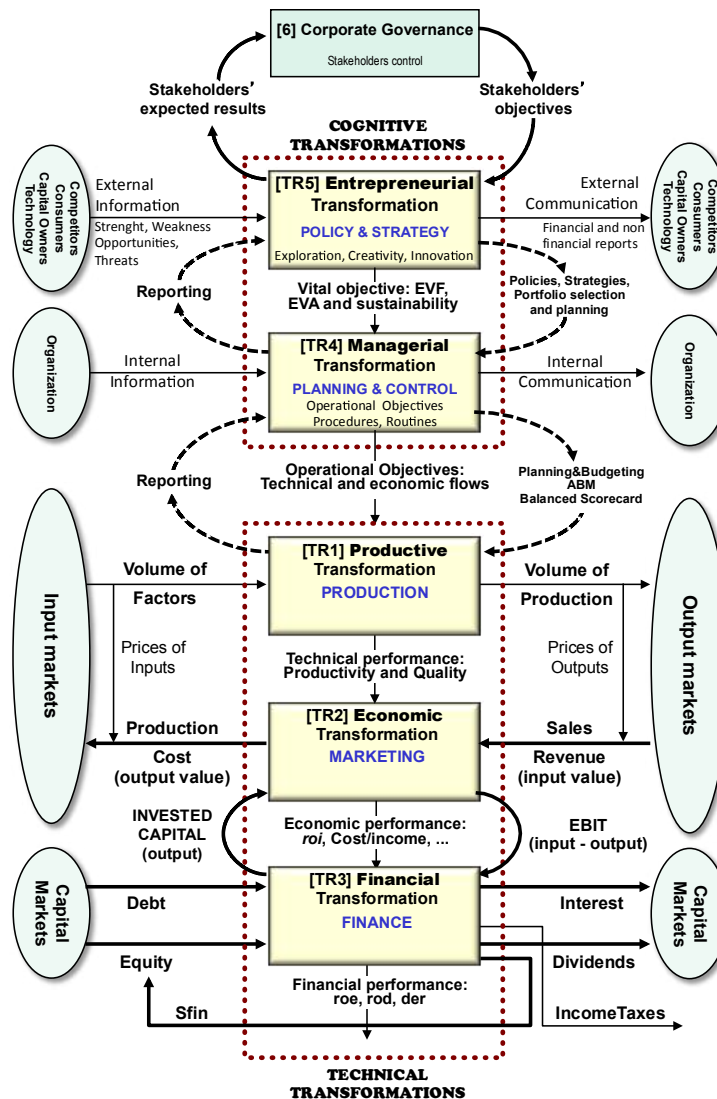


Figure 2. Model of the organization as an efficient system of transformation (Mella, 2014)

### The capitalistic firm as a control system

The five transformations of the MOEST are interconnected. A necessary condition for the firm to activate the first three “technical” transformations [P], [E] and [F], is that two “cognitive” transformations also be carried out: the *entrepreneurial* [I] and *managerial* [M] transformations, whose function is to “control” the “technical” transformations.

Figure 2 shows that the *entrepreneurial* transformation, [I], identifies, or receives from the governance, the *vital objectives* for survival and determines the *policies* and *general programs* that become the *strategic objectives* the *managerial* transformation, [M], must achieve through the Control Systems (normally defined as *strategic*), which act at the business and general function levels. Figure 2 indicates that the *managerial* transformation, [M], translates the strategic objectives into *operational objectives*, to be achieved by means of a planning and budgeting program which is necessary for the *operational control* system to produce the necessary strategy to activate the available levers. The *entrepreneurial* transformation, [I], is, in turn, subject to an *institutional control* at an even higher level, carried out by the stakeholders, who represent the CORPORATE GOVERNANCE. In fact, the amount of control [I] has in the organization depends on the limits set by the governance. The model in Figure 3 (see Appendix) illustrates the role of the three technical transformations in implementing the control in order to achieve the vital objectives and provides technical clarity regarding the policies and strategies of production organizations viewed as multi-objective, multi-lever Control Systems.

Viewed as control systems, capitalistic firms display a cognitive behavior aimed at survival, and it can be viewed as a living system that reproduces itself over time, along the lines of Maturana & Varela’s analysis: “*If living systems are machines, that they are physical autopoietic machines is trivially obvious [...] However we deem the converse is also true: a physical system, if autopoietic, is living*” (Maturana & Varela, 1980, p.82).

The idea that the capitalistic firm is a living system which self-regulate its dynamics in the environment to achieve vital objectives, has been excellently described by Salvatore Vicari in a convincing book entitled *The Organization as a Living System* (Vicari, 1991) and by Arie De Geus in his work *The Living Company: Habits for Survival in a Turbulent Business* (2002; see also 1997). De Geus clearly shows the importance of cognition and learning for an organization’s teleonomy, especially large corporations, whose teleonomic activity can be interpreted only by assuming that the organization (company) is a living being and the decisions for organizational activities taken by this living being result from a learning process.

It is not without significance that the *Forward* of this work was written by Peter Senge, who sums up the reasons organizations must be viewed as living beings and not as simple machines. Among these reasons, I find the following quite convincing:

Seeing a company as a machine implies that its actions are actually reactions to goals and decisions made by management. Seeing a company as a living being means that it has its own goals and its own capacity of autonomous action.

Seeing a company as a machine implies that it will run down, unless it is rebuilt by management. Seeing a company as a living being means that it is capable of regenerating itself, of continuity as an identifiable entity beyond its present members.

Seeing a company as a machine implies that its members are employees or, worse, “human resources”, humans standing in reserve, waiting to be used. Seeing a company as a living being leads to seeing its members as human work communities.

Finally, seeing a company as a machine implies that it learns only as the sum of the learning of its individual employees. Seeing a company as a living being means that it can learn as an entity, just as the theater troop, jazz ensemble, or championship sport team can actually learn as an entity. In this book Arie argues that *only* living beings can learn (Senge 1997, pp.IX-X).

Management is the extrinsic manifestation of the so-called “cognitive chain”, implemented at every level of the organization, which is composed of the “decision-action-control” links in the chain, which produce the outcomes in the environment composed of the various categories of stakeholders. The complex



performance measures of *outcome* or *benefit*: the efficiency of materials, technical innovation, energy efficiency, community relations, eco design, product recyclability, and employee relations.

The attainment of perceived levels of *social performance* produces *reputation*, *brand* and *confidence*, so that the environment itself sets the conditions for the firm's legitimation and consent, which favors auto-poiesis and thus a lasting existence for the enterprise as a social unit as well as an organizational type. This implies, on the one hand, the organizational ability to recognize the set of relevant stakeholders as well as to identify their expectations, and on the other the capability to communicate the global "value" produced in terms of social benefits and prevented damage to the physical environment. The following section proposes an expanded model of the Balanced Scorecard which also includes these social variables.

### Expanding the Balanced Scorecard in a capitalistic firm

Capitalistic firms cannot be limited to merely controlling financial performance. A number of other interesting non-financial variables can serve as performance indicators. Created by Kaplan and Norton (1992, 1996, 2001), the *Balanced Scorecard* (BSC) is one type of *corporate dashboard*, which provides top management with information for a continual evaluation of the performance of an entire firm. As an instrument of strategic control, the role of the BSC can be represented by a model entirely similar to the one in figure 4, considering only the rectangular boxes.

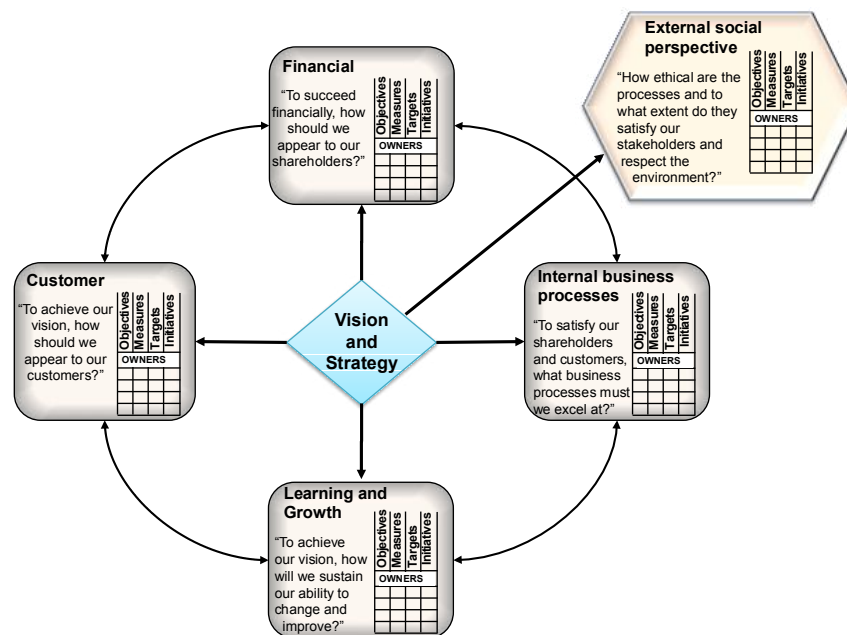


Figure 4. The BSC as a strategy-forming instrument (Mella, 2012, p.190)

The BSC considers four *strategic variables*, or *perspectives* (or focuses), held to be fundamental for providing management with a "balanced" perspective on the *strategic performance* of the firm:

1. *Financial perspective*: how the organization wishes to be viewed by its shareholders;
2. *Customer perspective*: how the organization wishes to be viewed by its customers;
3. *Internal Business Processes perspective*: through which processes the organization develop its abilities in order to satisfy its shareholders and customers;
4. *Organizational Learning and Growth perspective*: which changes and improvements must the company make to implement its vision.



Each perspective is represented in a *scorecard* and a weight of relative importance is assigned to it. For each perspective a limited number of *performance measures* that managers deem truly significant are included in the BSC, as shown in figure 5.

Perspective	Number of Measures	Weight
Financial	5	22%
Customer	5	22%
Internal Business Processes	8 to 10	34%
Learning & Growth	5	22%

*Figure 5. Weights and measures of the BSC perspectives (Kaplan and Norton 2001, p.375).*

The following measures are particularly efficient in choosing each perspective:

a) measures for the financial perspective: value of the action, growth in profits, profit rate, ROI, EVA, ROE, operating costs, operating margin, corporate objectives, survival, profitability, growth, cost reduction, increase in ROI, cash flow, earnings, increase in earnings, profit rate of shares, and so on (Mella, 2005);

b) measures for the client perspective: service level, market share, new clients, new products, new markets, customer satisfaction, customer loyalty, product reliability, perceived quality of the product and/or collateral services, customer complaints, etc.;

c) measures for the internal perspective: increase in efficiency, quality of processes, utilization rate of production capacity, stock storage period, waste, recycling rate of production waste, remanufacturing, lead time, average unit cost, employee morale, motivation, and so on;

d) measures for the learning and growth perspective: trend in value creation, product diversification, supplier diversification, increase in R&D, risk diversification, strengthening of internal control, development of new products, continual improvement, technological leadership, employee involvement, etc.

In its original formulation the BSC had a mainly internal point of view. In order to measure social performance (Clarkson, 1995) it is useful to include in the BSC a new scorecard that measure the firm's capacity to create well-being for the collectivity and demonstrate the firm's social utility by indicating its capacity to achieve social and environmental objectives (Ranganathan, 1999). In fact, capitalistic firms must, in any event, include in their strategy actions that guarantee that the environmental constraints of sustainability, ethical behaviour and, in general, Corporate Social Responsibility (CSR) are respected.

For this reason the model in figure 4 also includes a *fifth scorecard* (the hexagonal shape) for the continuous monitoring of the performance of the entire firm evaluated from an *external perspective* with regard to the interactions with the external stakeholders. In effect, according to Kaplan and Norton,

The four perspectives could be viewed as a scheme of reference and not as a straihjacket. Many organizations use the BSC and establish relative weights for each of the scorecard measures. These relative weights are used to evaluate performance (Kaplan & Norton 1996, p.34).

If, as we have indicated, the scorecard could guide us in growing our business, then it is natural to believe it possible to change the number of perspectives, areas, or focusses (Olive et al., 1999, p.120).

The *measures* for the new external perspective could involve, for example: actions to guarantee CSR; respect for the environment and measures for environmental sustainability; the elimination of refuse without damage to the environment; the use of the "commons"; the use of renewable and clean sources of energy; ethical behavior by the organization; ethical production that does not harm individuals; measures to enhance the reputation of the organization (Gazzola & Mella, 2015; EEA, 2001).

## Conclusion and final remarks

The BVCOs should not be considered merely as systems for the production of value for stockholders but also as economic social actors which operate in a social environment to which they belong and with

which they interact, not only through a system of monetary and financial exchanges (Clarkson, 1995) but also through physical, human and communication flows that produce knowledge, trust and reputation with regard to the optimal use and safeguarding of human, natural and social resources. In this way it becomes possible to judge the social responsibility of the firm (Keeley, 1988) and promote an image that gains the consensus of the collectivity and enhances the reputation of the firm, which in turn is fundamental for ensuring greater trust by the public (Zadek, 2001). *Economic prosperity, environmental quality and social justice* are the pillars on which the creation of corporate value is based, according to the “triple bottom line” (Warren, 1999).

Autopoiesis thus implies both the attainment of a high degree of *endogenous teleonomy*, through the search for internal conditions for survival by means of an optimal mix of creativity, productivity and incentive systems, and a high degree of *exogenous teleonomy*, which guarantees the external conditions for survival through an increase in customer satisfaction (obtained from the optimal mix of quantity, quality, variety and price of production) as well as in social satisfaction, deriving from the valued social impact of the organization (spread of employment, rise in average income, payment of taxes, environmental interest, etc.).

In order to maintain the autopoiesis and viability of *capitalist firms*, the entrepreneurial and managerial transformations must formulate strategies that guarantee investors a financial return (interest or dividends) at least equal to the opportunity cost of the best alternative investment (fair cost of capital), while maintaining an acceptable degree of risk (actuarial integrity) and, in any event, preserving the purchasing power of their capital (monetary integrity) (Boulton et al., 2000). Nevertheless, autopoiesis also depends on the extent to which the policies and strategies of the entrepreneurial transformation respect the constraints imposed by the external stakeholders and thus guarantee ethical behavior, the sustainability of production, the safeguarding of the environment, and, in the final analysis, the social needs of the entire collectivity.

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### Appendix – Control systems in short

A variable  $Y_t$  is “controllable” if, on a temporal, discrete or continuous scale,  $t=1, 2, \dots$ , we can assign it a given value  $Y^*$  (set-point) which can represent an objective, goal, constraint, or limit of  $Y_t$ . If  $Y_t \neq Y^*$ , we can measure a distance, variance or error, indicated by  $E(Y)_t = Y^* - Y_t$ .

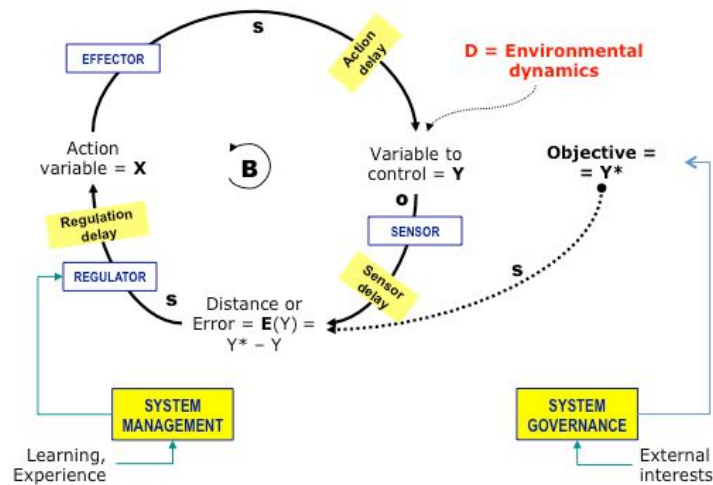
We define  $X_t$  as a control variable which determines the values of  $Y_t$  according to a causal relation (defined by some process or apparatus), so that, by acting on  $X_t$ , we can produce a dynamics for  $Y_t$  that tends toward  $Y^*$ .

We define as a Control System any set of apparatuses, logical or technical (algorithm or machine, rule or structure, etc.) that, for a set of instants, perceives  $E(Y)_t$ , calculates and assigns the values  $X_t$ , and produces the appropriate  $Y_t$  to gradually annul, when possible, the error  $E(Y)_t = Y^* - Y_t$  at instant  $t^*$ .

The variable  $X_t$  (or, if there is more than one variable, the vector  $[X]$ ) is also defined as the action variable, the control lever, or the active variable. If  $[X]$  is composed of  $N$  action variables, the system is called a multi-lever control system.

We define the manager of the Control System (in the broadest sense of the term) as the subject (individual, group, organ or organization) that, through a series of decisions – based on its particular culture, experience and preferences – can regulate the  $X_t$  in order to change the  $Y_t$ . We define the governance of the system as the process by which the objective  $Y^*$ , or the vector  $[Y^*]$ , is determined.

With multi-lever systems it is fundamental to understand the concept of *strategy*, which entails programming the activation of the various levers to achieve the objectives. In multi-objective systems the choice of strategy is coupled to the definition of policy; that is, the activity through which the governance and management choose the order of priorities regarding the various objectives. Specifying the control strategies requires introducing the concept of cost–benefit analysis applied to the various levers. Specifying the control policies brings up the notion of a scale of priorities for the various objectives.



*Standard Model of a one-lever Control System (Mella, 2014, p.49)*