

## Proposal evaluation and continuous improvement of the Business Management System of the Institute of Animal Science

### Evaluación de la propuesta y la mejora continua del sistema de gestión de negocios del Instituto de Ciencia Animal

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#### *Abstract*

*Commercial System Management Institute of Animal Science is evaluated applying a Model of Business Excellence from the results derived from a rigorous and extensive literature review on modern theories and approaches associated with trade and business management, as well as methodologies that allowed for an assessment systemic, multifactorial and inclusive, corresponding to the narrow natural link between the evaluated activity and business management of an organization. It's applied the European Model of Business Excellence, which allowed the characterization with a great level of detail the main deficiencies associated with Leadership, Policy and Strategy, Resource Management, Human Capital and Processes, staff satisfaction and Customers, and Business Results Impact on Society, which do not favor an appropriate commercial management the products of science in the institution. Moreover, they applied specially designed by the author surveys that complement and extend the study to achieve the objectives. We show that the current conception of the organizational structure and management system ICA business does not contribute to effective marketing products and services mentioned the absence of a specialized team, with defined responsibilities and its own budget, to ensure the link naturally between the market and researchers; hence, the need for ensure the new conception the natural link between the functions of the researchers and business managers; the first, as responsible to ensure the scientific characteristics - technical products and services; the second, of all those linked to the security and safety marketing. At the same time, measures and means proposed for the improvement of the evaluated system, ranging from a proposed structure for commercial management system, to theoretical concepts and practical applications.*

**Keywords:** *EFQM model, Business Management, Sales Management, Evaluation*

## *Resumen*

*El sistema comercial de gestión del Instituto de Ciencia Animal se evalúa aplicando un modelo de excelencia empresarial de los resultados derivados de una revisión rigurosa y extensa de la literatura en las modernas teorías y enfoques relacionados con el comercio y los negocios de gestión, así como metodologías que permitieron una evaluación sistémica, multifactorial e integradora, correspondiente al estrecho vínculo natural entre la actividad evaluada y gestión empresarial de una organización. Este aplica el modelo europeo de excelencia empresarial, que permitió la caracterización con un gran nivel de detalle las principales deficiencias asociadas con el liderazgo, política y estrategia, gestión de los recursos, capital humano y procesos, satisfacción del personal, clientes y negocios, así como sus resultados e impacto en la sociedad, que no favorecen a una adecuada gestión comercial de los productos de la ciencia en la institución. Por otra parte, aplica diseños especializados por los estudios de autor que complementarán y ampliarán el estudio para alcanzar los objetivos. Mostramos que el concepto actual del sistema organizativo de la estructura y gestión empresarial de ICA no contribuye a la efectiva comercialización de los productos y servicios mencionando la ausencia de un equipo especializado, con responsabilidades definidas y su propio presupuesto para asegurar el enlace natural entre el mercado y los investigadores; por lo tanto, la necesidad de asegurar la nueva concepción del vínculo natural entre las funciones de los investigadores y administradores de empresas; el primero, como responsable de garantizar las características científicas - técnicos productos y servicios; el segundo, sobre todo las relacionadas con la seguridad y comercialización de seguridad. Al mismo tiempo, las medidas y los medios propusieron para la mejora del sistema evaluado, que van desde una estructura propuesta para el sistema de gestión comercial, a conceptos teóricos y aplicaciones prácticas.*

**Palabras clave:** *Modelo EFQM, gestión empresarial, gerencia de ventas, evaluación.*

### **1. Introduction.**

In an extensive and rigorous work of Deming (1989), which analyzes by what about the loss of competitiveness of many companies in the world, It raises emphatically that this problem is given by a lack of business management with integrative, systemic and systematic nature; in this regard, states that such approaches constitute true theoretical and practical tools to manage a business.

Harrington (1997), Hayden (1998), Gonzalez, A. (2000, 2002), they agree that the trend increasingly growing globalization of the economy and international trade, together with technicians made scientific achievements have significantly elevated the role of management and, within it, the commercial management, as a true system composed of several factors closely interrelated, thus becoming a factor determinant in production processes and services of any organization. In fact, many authors consider that understand or not, will be the foundation for a business succeed or fail in its management aspect raised with emphasis by Luis and Luis (2005).

An organization that wants to ensure that customers have a positive vision and opinion

it and its products, must manage the product itself, its price, its relationship with customers, suppliers and its own employees, own advertising various means and media, and the presence in the media (public relations). All this is part of Marketing, or Commercialization, and it should be taken into account to design, organize, execute and control the marketing function of the organization.

The incorporation of the aforementioned concepts can be an element that contributes the establishment of appropriate building socialism proportions, studying as a source of customer needs, expectations and desires to satisfy, to plan production rationally as having the same center. In Cuba, this interpretation, it can be used as a tool in the service of building socialism to achieve two goals: efficiency in production and services and the increasing satisfaction of needs, desires and expectations customers.

Similarly, the trend increasingly growing globalization of the economy and business, together with the technical scientific achievements worldwide, have significantly elevated the role of the marketing of products and services derived from knowledge, innovation and technology as a determining factor in the market, which requires companies and organizations dedicated to these issues improve their business management systems according to the context and requirements current market (Luis, 2010).

This is evident defined the concept of Innovation is analyzed by numerous authors, from the support provided by Schumpeter (1967) to those provided by Drucker (1981, 1998); Pavon and Hidalgo (1997); Luis (2000); Knott (2003) and Avermaete et al. (2004). Then the definition given by Pavon and Goodman (1976) exposed by his closely related to the objectives of the work: "... a systematic and deliberate process by which they purport to alter certain factors of the company and are designed new ideas which, once developed, allow the placing on the market new products or processes, adoption by the company of new structures organizational, employment and new business management techniques. " In knowledge, many have been the definitions that have been offered to this term throughout history, among which stand out for their content, of Foster (1987), Benavides (1998); (2003); Sbragia and Ozorio (2004) and Perez and Adarmes (2005). However, it is considered that offered by Pavon and Hidalgo (1997) is very appropriate and relevant in relation to the object of study supports this work, "... the system of knowledge and information derived from the research, experimentation or experience and which, together with methods production, marketing and management of its own, can create a form reproducible or generate new or improved products, processes and services ".

The concept of technology transfer, so new in some sectors, insufficient in more advanced areas of collaboration where we should refer to share the "savoir faire", the "know how" or simply "knowledge", as claimed by Sanz and Giral (2001). These authors believe that new concepts and incorporate complex categories such as technology management, technology strategy and technology consulting aspects; without forgetting that technology transfer benefits when the company also has a qualified human capital, namely technologists, science teachers and doctors in science and technology.

The term is, according to Vargas (2004) is the dynamic axis systems it productive through which seeks to achieve greater equity, productivity and competitiveness in the new scenario of trade liberalization. The latter is a condition that arises as a result of the world economic order, changes in

trade and increasing international flows of human resources and capital.

Its importance is such that still continue provided input on the subject in the most recent international literature; Examples are the work of Swamidass (2003), Lucchetti (2004), Fabiani et al. (2005) and Bayo and Lera (2007). As you can see, the marketing of products associated with the knowledge, science, innovation, technology and technology transfer, is an interesting and complex issue that must be addressed carefully, since it brings together a set of requirements that personalize and differ from traditional concepts associated with the term. In this regard, the Cuban livestock sector, the results are not optimal because it does not correspond to demand, or express the productive potential that, in this influence aspects transiting economic, social and political, with a large impact on the national scene.

These problems may be brought about largely by the limited experience regarding the most appropriate way to manage and market the products and services derived from Technology Management, Innovation and Knowledge, coupled with inadequate preparation of the related technical and professional staff and accountable to business management and, in particular, with management trade in the products concerned, in particular in relation to the market characterization, their needs, expectations and real possibilities for acquire and implement such products and services.

Suarez (2002, 2003) states that these disadvantages are certain or very influenced by the absence of procedures to allow companies to diagnose and assess the technological processes, monitor their technological and competitive environment, develop technological development plan in the framework of a technological strategy that corresponds to the overall strategy of the company and to enable it to enrich and improve their technological heritage, and protect its products and technologies.

It is appropriate to comment in relation to the previous idea, that in a scenario in which

It intends to market the aforementioned products, the overall strategy of the company

It must be conceived largely on the basis of the results derived from systematic monitoring of the environment through which the needs are detected and customer expectations and technological development of competition without compromising their own development, so that allows you to enrich and improve their technological heritage, and protect its products and technologies. Such reasoning to suggest the need for more researchers become more managers and the managers become more researchers. As can be seen, the business world has undergone a major transformation in recent years. Customers today expect products are high quality, provide broad benefits and acquired at a low price. These expectations are the result of rapid technological progress and the upsurge in global competition, pushing companies to become more competitive and take strategies for business excellence.

Similarly, it is essential to point out two important ideas: first, market is increasingly closed for goods, services and products that are not of high quality, and for organizations that are not able to demonstrate that they can meet the expectations of their customers; second, that quality is impossible to achieve without a new conception of system business and commercial management based labor organization, labor relations, management of human capital, methods of management and leadership and application of scientific technical approaches character system (Luis, 2005).

Failure to do so would imply not act in accordance with the present moment in which the management of a company can not be solely focused on its core business, product or service provided,

and that is its purpose, but should focus on all and each of its different activities, namely: leadership, policy and strategy, people management, resources and processes, customer satisfaction, its human capital and, of course, their business and social impact. Martin and Luis (1998) argue that achieving this goal in the specific context of the business and commercial management in Cuba, involves overcoming really formidable obstacles: technological limitations, dependence on external inputs, failures in work processes, insufficient culture quality and business, methodological approaches and address is not updated on the basis of efficient management of its human capital, change current labor relations, leadership, achieve a participative style and aware of all workers, decentralization of activity and authority, tolerance to new ideas, transparency and timeliness of information and other reasons this order. Well, that will require a revolution in thinking, which derives a different way not only to think but to act, and change not only the way Cuban entrepreneurs see the world, but much more, your way of living in the world. Everything raised so far to the transfer is particularly important for the projection of future activities of the Institute of Animal Science (IAS), which has been dedicated to the development of research in the field of animal production, technologies in different production systems and scales and training technicians, professionals, producers and specialists to Cuba and the tropical area.

Today, as a logical consequence of the changes and transformations taking place in the country in order to improve and strengthen its socialist economic model, the IAS makes an attempt to strengthen the marketing of products and services derived from their research. Consequently, the need for changes and modifications in the design of its current management system in order to adapt to new circumstances and scenarios is evident.

On the premises the elements described above, the evaluation of their management

Business is done through the implementation of a Business Excellence Model, EFQM as being a tool to conduct a comprehensive self-assessment of the management of any company. Such application shall take into account and try to generalize the most significant elements and best experiences from their implementation, based on that managers and workers themselves learn to identify their problems and develop a plan of action consistent approach. A valuable by adopting the EFQM Model as a tool for self-assessment aspect is that it allows an objective of the key elements of the business strategy in its close relationship and dependence of business strategy review as well as the evolution of a program solidly based improvement, all while it is allowing periodic evaluations of each of the criteria for determining the degree of development and to facilitate the identification of potential areas for improvement. Normally, the benefits derived from the application of this approach far outweigh the costs required according to studies by Luis (2006), Luis and Luis (2009) and Membrado (2008). In addition, it can serve to promote and focus the efforts of company staff, improvements in the organization as a basic strategy of its commercial and business management, a road or path to excellence.

The paper has as main objective to determine the main objective and subjective problems in the commercial and business management of the institution as well as the main causes associated with it; at the same time, propose a plan of action with a systemic approach that will contribute positively to its continuous improvement, with its logical economic, social and cultural impact of the company.

## 2. Literature review

### 2.1. Business Management

Many scholars of the concepts and theories related to the subject of management business, for many years, consider them as the most consistent and effective to manage in system form a company and lead the destinies of it to success criterion which coincide Albrecht and Bradford (1990), Juran (1992, 1993), Harrington (1997), Ishikawa (1998), González A. (2000, 2002), Luis and Luis (2005, 2009), to broach the subject with emphasis on quality management and its relation to business management.

All business management will be based on the strategy that for this purpose the undertaking proposes; and this is nothing but the set of guidelines, goals and means are identified in order to define a path to the company and is the framework that defines the scope of it, allowing the integration of activities and purposes of its various areas and staff, in particular to point out the scope, limitations and priorities to do business and their impact on the activities of each (Menguzzato and Renan, 1997; Mintzberg, et al, 1997; Mintzberg, 1992). Donnithorne (1994) argues that the business strategy must be properly managed and controlled by the top leadership as a system and not isolated elements that respond to particular or specific interests of a given time, considering that the company is a complex set people, resources, processes, cultures, which is constantly changing as the surrounding environment; therefore, the company must first know what goals to be routed and then lead and coordinate all efforts to achieve these goals. Towards this, among other important elements, it should be directed the management of a company.

In the world, there have been various methodological approaches to address linked to strategic business management processes such as those mentioned by Mantilla and Valdes (1996), Kasttner (1997), Porter (1997, 1998, 1999), Hayden (1998), or referred to and carefully reviewed by Luis (2000, 2000a), Luis (2005, 2005a), Luis (2006). Others like Madrigal (2000) have alluded to the importance of incorporating Integrated Management Systems as an inescapable reality of its importance.

Thus, and for the effective performance of work is evident the need introduces technologies and knowledge that have already been used in the world satisfactory, adequate and adjusted to the characteristics and peculiarities of the country and the company under study results as well as professionals and workers who will use them (Luis, 2000), criteria previously exposed one way or another in Cuban conditions Bode (1986), Gomez Trueba (1990). Similarly, they can be very interesting concepts and approaches provided by Madrigal (2000), which, no doubt, must be properly inserted and applied in the management of Cuban enterprises and particularly for the case it presented.

The experiences analyzed have shown that the method used should be applied taking into account the particular characteristics of the organization in the which wants to implement, as well as its environment and the specific time in which you intend to use. In short, it is important to understand that no methodology has been without criticism and should not be generalized application (Deming, 1989; Albrecht, 1990) and selected must take into account the country, place or senior management interest in its application. The employee during this investigation as a method of self-evaluation will be the EFQM model, already used with successful results in different productive sectors in Cuba and other countries for Figari (1996), Luis (1997, 1997a, 1997b, 1997c, 1997d), Luis (2000), Luis et al. (2005) and Luis and Luis (2010), primarily for conducting business diagnostics companies with different corporate purposes, including trading companies. A detailed analysis of the same will be done later.

### **3. Development**

On the premises the elements described above, the evaluation of its business management is done through the implementation of a Business Excellence Model, EFQM as being a tool to conduct a comprehensive self-assessment of the management of any company. Such application shall take into account and try to generalize the most significant elements and best experiences from their implementation, based on that managers and workers themselves learn to identify their problems and develop a plan of action consistent approach.

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### **4. Materials and Methods**

European Business Excellence Model (EFQM for its acronym in English), which seeks to promote management approach leading companies to sustained excellence was used for the evaluation of Business Management System at the Institute of Animal Science. This approach is based on nine Fundamental Principles of Excellence, Leadership, Policy and Strategy, Resource Management, Human Capital and processes, staff satisfaction and Customers, Business Outcomes and Impact on Society, constituting a valuable instrument diagnosis, planning and decision making, having the great advantage that it can be used with or without the help of outside experts or consultants.

The structure of the EFQM excellence model is a non-prescriptive framework based on nine criteria. Five of these are Enablers and the remaining four results. The criteria refer to a facilitator organization dealing ago, while those related to dealing with what results the organization achieves by (Simon and Garay, 2008). It could therefore be said that the results are a consequence of Enablers, and that they are improved using information from the results through innovation and learning as shown in Figure 1.

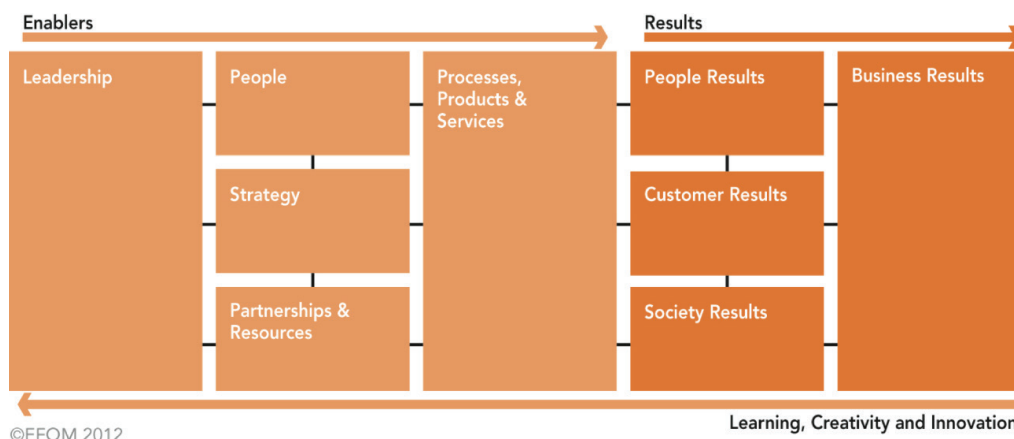


Figure 1. European Foundation for Quality Management

For the self-assessment questionnaires own model was used for the evaluation of Business Management System. The questionnaire, designed to be answered individually and subsequently make integration has four levels of response, represented by the letters D, C, B and A. All responses D, C, B and A, indicate the level of development in question to be answered by the evaluator. Answers to indicate an excellent orientation and development aspect evaluated, and it behooves a value of 100 points. B responses indicate good orientation and development in that area, and it behooves a value of 67 points.

Unlike the above, the responses C and D indicate an orientation and development assessed regular and bad appearance, and they are given values 33 and 0 points, respectively. In this way, the answers to this questionnaire will indicate, by the type C and, especially, those of type D, the weakest points of the company according to the criteria of the European Model of Business Excellence. With them you will have the list of actions to take, including setting priorities and draw up a plan for improvement.

The evaluation of each criterion was performed by the following equation [1]:

$$EC = \frac{a \cdot b}{r} [1], \text{ where}$$

EC: Evaluation criteria

a: Score corresponding (A, B, C or D)

b: Number of responses.

## 5. Results and discussion

In tables 1 to 4 are shown, the main aspects are evaluated through the European Business Excellence Model, with different organization of the results for ease of explanation and understanding.

Table 1 shows the qualitative results associated with each of the different types of questionnaire responses self-assessment, once applied in all directions and on the basis of a total of 80 respondents are presented.



Table 1  
 Total values of each response level and score for criteria.

	Weightage /Type of Response.				Question by criteria	Total of answer	Score by criteria
	0	33	67	100			
Criteria	D	C	B	A			
Leadership	230	130	40	0	5	400	17,43
Strategy	120	120	60	20	4	320	31,19
People	260	250	100	30	8	640	28,05
Partners and Resources	170	110	40	0	4	320	19,72
Processes, Products and Services	370	300	120	5	10	795	23,19
People Results	890	330	60	0	16	1280	11,65
Customers Results	180	190	30	0	5	400	20,70
Society Results	40	80	30	10	2	160	35,31
Business results	360	120	80	0	7	560	16,64
<b>Total</b>	2620	1630	560	65	61	4875	20,06
					<b>Overall rating of the Company</b>		<b>79,92</b>

From that table it is appreciated that a total of 4,875 responses are associated with the levels D and C; of this, 2,620 correspond to the rating of D, and 1,630 to the grade of C. In percentage terms these values represent 53.69 and 33.40%, respectively, with a grand total of 87.09%. (See Tables 2, 3 and 4).

Grades B and A were granted only 630 responses total of 4875 possible, representing only 12% as can be seen in Table 2. Of this total, 11% corresponds to ratings of B and only 1% to A. ratings

The higher absolute values of responses D correspond to Customers criteria: Results (890), processes (370), company results (360) People (260) and Leadership (230), representing 0.70 percentage values; 0,46; 0,64; 0.41 and 0.58, respectively. (See Tables 1 and 2).

The highest values of responses C correspond to Customers criteria: Results, Processes (300) People (250), People Results (190), Leadership (130) and results of the company (120), which represent percentage values 0.26; 0.38; 0.39; 0.48, 0.33 and 0.21, respectively. (See Tables 1 and 2).

In analyzing the responses of type B, which denote certain development in the criteria evaluated, note that the best values are associated with processes (120) People (100), results of the company (80) and Policy and Strategy (60). It is noteworthy that the above criteria match the higher values of negative responses such as C and D.

**Table 2**  
**Percentage of each level of response criteria.**

	Weightage /Type of Response.				Question by criteria	Total of answer	Score by criteria
	0	33	67	100			
Criteria	D	C	B	A			
Leadership	57,50	32,50	10,00	0,00	5	400	57,50
Strategy	37,50	37,50	18,75	6,25	4	320	37,50
People	40,63	39,06	15,63	4,69	8	640	40,63
Partners and Resources	53,13	34,38	12,50	0,00	4	320	53,13
Processes, Products and Services	46,54	37,74	15,09	0,63	10	795	46,54
People Results	69,53	25,78	4,69	0,00	16	1.280	69,53
Customers Results	45,00	47,50	7,50	0,00	5	400	45,00
Society Results	25,00	50,00	18,75	6,25	2	160	25,00
Business results	64,29	21,43	14,29	0,00	7	560	64,29
<b>Total</b>	53,74	33,44	11,49	1,33	61	4.875	53,74

In the case of staff management criteria and processes responses of type A can also be seen, which favors them in terms of total score, denoting some development on some of the aspects evaluated in the above criteria. type responses are also seen in the policy and strategy (10) and Society Results (5) criteria.

The best combination of positive responses of type A and B is obtained in the criteria Persons (65), Processes (65) and Leadership (40). Hence, its favorable location in the score when compared to the rest of the criteria.

It is interesting to note from the perspective of combined analysis of the tables as the criteria 8, 2, 4 and 9, corresponding to Impact on Society, Policy and Strategy, Alliances and Resources and results of the company are the best placed among all evaluated. However, their values are markedly lower if are compared with those reported by successful companies.

This observation, apparently favorable to the above criteria, will no longer be if the score obtained by each of them after the comprehensive assessment of each type of response is analyzed. This analysis is clear in the sense that the impact on society (35.31) and Policy and Strategy (31.19) criteria occupy the top two places in that order, while the criteria Resources (19.72) and results of the company (16.64) occupy places 6 and 8, respectively, among the nine analyzed. The most unfavorable position corresponds to criterion Customer Satisfaction (11.65).

Finally, the order corresponding to each criterion within the order by score after comprehensive analysis of all responses, according to Table 1 is:

1. Leadership: 17.43
2. Policy and Strategy: 31.19
3. Persons: 28.05
4. Partnerships and Resources: 19.72

5. Processes: 23.19
6. Person: Results: 11.65
7. Customers: Results: 20,70
8. Society Results: 35.31
9. Results in: 16

Table 3  
 Accumulated values to each level of response criteria.

	Weightage /Type of Response.				Question by criteria	Total of answer
	0	33	67	100		
Criteria	D	D+C	D+C+B	D+C+B+A		
Leadership	230	360	400	400	5	400
Strategy	120	240	300	320	4	320
People	260	510	610	640	8	640
Partners and Resources	170	280	320	320	4	320
Processes, Products and Services	370	670	790	795	10	795
People Results	890	1220	1280	1280	16	1280
Customers Results	180	370	400	400	5	400
Society Results	40	120	150	160	2	160
Business results	360	480	560	560	7	560
<b>Total</b>	2620	4250	4810	4875	<b>61</b>	<b>4875</b>

A logical consequence and demonstrates the difficulties associated with commercial management system of the organization linked to the products and services derived from science interpreted from the previous scores are the results criteria Leadership, Partnerships and Resources, Processes and People: Results; the first three considered among the agents, which explains the negative impact on customer satisfaction and business results.

As a result of the low values of each of the above criteria, a global company score only 20% is obtained. This is an interesting indicator denoting the need for continuous improvement of enterprise management system of the company as a preliminary step to achieve a positive impact on improving business management.

Leadership, Policy and Strategy, People, Partnerships and Resources and Processes have to be more focused in terms of the issues raised in the corporate purpose of the institution, if it is to implement the desired and necessary policy market products and services derived from science and as a way to improve results.

**Table 4**  
**Percents accumulated to each level of response criteria.**

	Weightage /Type of Response.				Question by criteria	Total of answer
	0	33	67	100		
Criteria	D	D+C	D+C+B	D+C+B+A		
Leadership	57,50	90,00	100,00	100	5	400
Strategy	37,50	75,00	93,75	100	4	320
People	40,63	79,69	95,31	100	8	640
Partners and Resources	53,13	87,50	100,00	100	4	320
Processes, Products and Services	46,54	84,28	99,37	100	10	795
People Results	69,53	95,31	100,00	100	16	1280
Customers Results	45,00	92,50	100,00	100	5	400
Society Results	25,00	75,00	93,75	100	2	160
Business results	64,29	85,71	100,00	100	7	560
<b>Total</b>	53,74	87,18	98,67	100	<b>61</b>	<b>4875</b>

This involves making interesting and conceptual changes needed, ranging from business strategies and consequently in shaping the organizational structure.

For the same the preparation of a derivative action plan and in accordance with the results of the evaluation of Business Management System is necessary. Following the logic of the Business Excellence Model, measures should be proposed criterion by criterion on the basis of the score obtained by each of them, according to the types of responses associated with each question. Its development is founded on the matrices of the model itself.

## 6. Conclusions

1. The application of modern methodologies and techniques used in the work allowed diagnose and evaluate a system approach and participation of all departments, the main elements associated with the enterprise management system and business of the Institute of Animal Science, with special emphasis on products and services derived from science.
2. With the new political and economic changes that the country is suffering as a result of the new guidelines of the Party the direction of the Institute shall starring greater leadership in the marketing process to achieve greater results in a market that will become increasingly competitive for the companies.
3. The process of trade management has to be analyzed and a system approach, not as a separate process within the Quality Management System of the center.

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