Annex 10. Checklist of the DEAE-ISDE model.

Checklist

The following checklist represents a tool to identify the breachs that impede the strategic development of your organization. The answers to these questions can be classified from 0 to 1: from very low achievement (0) to high achievement (1), each state or situation that is presented in each question is marked by the values: 0 (first state), 0.1-0.2-0.3 (second state), 0.4-0.5-0.6 (third state), 0.7-0.8-0.9 (fourth state) and 1 (fifth state); You can only choose a score value within a state depending on the achievement that you consider that exists in the organization regarding the element to be evaluated. Once the list has been answered by at least 9 evaluators that meet the requirements set forth in the application procedure of this tool, a response based on **fuzzy logic** will be given, which is a language that provides reliable results for decision making through a mathematical model that decreases uncertainty in the final answer when it is based on expert opinion. This response will have a result between 0 and 1, the closer the value is to 1, the more satisfactory the results of the evaluation of your organization will be.

Stage I. Process-based Strategic Design

1.1 Strategic Team (ST). Is there a team formed by specialists from different fields that work in the strategic projection of the organization, and through IT (Information Technology) achieve efficient results in the short and long term?

0	0.1 0.2 0.3	0.4 0.5 0.6	0.7 0.8 0.9	1
Teamwork for strategic projection is carried out in an isolated and sporadic manner when necessary and is almost always made up of the main managers without the participation of specialists and experienced workers of the organization. IT are not the means to reach solutions to problems.	An organization management team has been created to solve everyday problems without a vision of the future. The team is mainly composed of members of the governing board and IT are used to display information only.	There are multidisciplinary teams that perform complex work within the key processes without a vision for the future or taking into account the relationships of the key processes with the rest of the organization's processes. They perform well as a team in the short term, when they use IT as a support for information exchange and communication.	There are multidisciplinary teams that carry out the activities of the key processes based on the strategic projection of the organization, but without taking into account the relationships of the key processes with the rest of the processes of the organization. They obtain good results as a team in the short and long term when they use IT intensively for the communication and management of the knowledge generated.	A multidisciplinary team is defined that leads the strategic changes of the organization and strengthens the relationships between senior management and the teams in the key and functional processes that provide impact results in the short and long term through efficient use of IT.

1.2 Communication between actors of the organization (CBAO). ¿Communication through Information Technology and other channels with client suppliers, administrative, regulatory and social entities; and with the workers does it contribute to increasing the performance of the important relationships of the organization that add value to the key processes?

0	0.1 0.2 0.3	0.4 0.5 0.6	0.7 0.8 0.9	1
IT are only used for independent functional activities in key and functional processes. The channels of formal and informal communication are deficient and many problems are generated due to the lack of internal and external communication.	IT are used to communicate some results of key and functional processes. Informal communication channels work better than formal channels and problems are generated because internal and external communication is insufficient.	IT are used to communicate the most important results of the key and functional processes. Informal and formal channels of communication work to some extent and expedite management a bit because internal and external communication has improved somewhat.	IT are used to communicate all the important results of the key and functional processes. Informal and formal communication channels work and relationships have increased their performance because internal and external communication has been strengthened.	The maximum use of IT and the efficient use of other informal and formal communication channels contribute to progressively increase the performance of internal and external relations and the contribution of continuous value to key processes.

1.3 Strategic course (SC). Does senior management efficiently develop the strategic projection of the organization?

0	0.1 0.2 0.3	0.4 0.5 0.6	0.7 0.8 0.9	1
No, only the current situation is analyzed and short-term	The projection of the organization is carried out based on the knowledge of the	The projection of the organization is designed based on the knowledge of managers and some	The projection of the organization is made from the knowledge of managers and specialists in the different key	The projection of the organization supported by the IT is carried out, based on

objectives are projected from there.	managers and annual objectives are defined. Very few objectives are achieved.	specialists, management techniques are not used to define the current and future situation, and annual and medium-term objectives are defined, which are neither challenging nor represent a leap from mission to vision. The update of the strategic projection is sporadic. Some objectives materialize in the strategic period, others do not.	processes of the organization, management techniques are used to superficially define the current and future situation, long-term objectives are defined that represent a small jump from mission to vision. The update of the strategic projection is annual. Most of the strategic objectives are met.	the knowledge of the managers and specialists in the different processes obtaining relevant information from the management of the IT, management techniques used allow to define the current situation widely and future from external and internal diagnoses, long-term objectives are defined that are challenging and represent a great leap from mission to vision. The updating of the strategic projection is quarterly, this guarantees the fulfillment of all the proposed strategic objectives.

1.4 Diagnosis, Design and Redesign of the Key Processes (DDRKP). Are key processes diagnosed, designed and redesigned according to the strategic projection of the organization and based on increasing the value added to products and services?

0	0.1 0.2 0.3	0.4 0.5 0.6	0.7 0.8 0.9	1
No, key processes have never been redesigned, and diagnoses are rarely made, only when there have been serious problems or external audits.	Key processes are sporadically diagnosed when internal or external audits are carried out. Once the strategic projection is defined, they are not redesigned.	The key processes are diagnosed annually, but rarely redesigned, the elements that add value to the products and services are not clear, when the strategic projection is updated the process update is not taken into account.	The key processes are diagnosed and redesigned annually taking into account the updated strategic projection of the organization and the Quality Management System, although the elements that add value to the products and services are clear, when the processes are redesigned these elements are not renewed or increased.	The key processes are diagnosed and redesigned annually taking into account the updated strategic projection of the organization, the elements that add value to the products and services are clear, each time the processes are redesigned these elements are renewed or increased.

1.5 Diagnosis, Design and Redesign of Functional Processes (DDRFP). Are functional processes diagnosed, designed and redesigned according to the updating of key processes and based on efficiently meeting their needs?

0	0.1 0.2 0.3	0.4 0.5 0.6	0.7 0.8 0.9	1
No, the functional processes have never been redesigned, the diagnoses that are made are only when there have been serious problems in the organization.	Functional processes are sporadically diagnosed when there are problems that greatly affect the performance of key processes or when external entities carry out controls. They are never redesigned, they always run the same. Many times they do not secure all the necessary resources to carry out the key processes.	Functional processes are diagnosed annually according to the problems occurred in the key processes. They have sometimes been redesigned as a result of the reorganization of the organization itself. Many times they do not secure all the necessary resources to carry out the key processes.	Functional processes are diagnosed annually according to the update of the key processes. Sometimes they are redesigned when the diagnostic results have been very negative. Sometimes they do not secure all the necessary resources to perform the key processes.	Functional processes are diagnosed annually according to the update of the key processes. They are redesigned annually and ensure the effective functioning of the key processes guaranteeing the continuous value addition in products and services.

Stage II. Strategic Design Based on the Business Architecture Approach (SDBBAA).

2.1 Strategic Business Dimension (SBD).

2.1.1 Process Surveillance Management (PSM). Does the organization through IT carry out surveillance actions to strengthen and improve the organization's processes and their relationships in the short and long term?

0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1

In the organization, information search actions are carried out through IT but they are not used to update and improve processes.	Some surveillance actions are carried out to solve some critical problems in the key processes taking advantage of resources such as the Internet.	Disordered surveillance actions are carried out to solve and anticipate the occurrence of problems that affect the efficiency of the processes in general, these actions are still insufficient to cope with the continuous changes and demands of the environment.	Surveillance actions are carried out based on the identification of variables to be monitored and the treatment of said variables, although not in an integrated manner, to anticipate the changes and keep the risks that affect the processes and the performance of their internal and external relations controlled.	There is a standardized monitoring process in all processes that contributes to the continuous improvement of these and their relationships, and is integrated into the strategic projection of the organization.

2.1.2 Process management and automation (PMA). Does the management of the automation of the activities of the organization contribute to the improvement of the performance of the processes?

0	0.1 0.2 0.3	0.4 0.5 0.6	0.7 0.8 0.9	1
No, the key and functional processes have automated activities in a disintegrated way which generates many problems instead of solutions.	Very little, the automated key and functional processes generate problems because there are disconnections between some processes, mainly between the key ones, the automated systems reproduce problems in the design of the processes and time losses occur due to this cause.	To some extent, since some adjustments have been made in the design of the processes and in the applications that support them, this has contributed to the key processes being carried out with greater agility, but there are still technical problems that cause process stops for a while.	To a large extent, since adjustments are made systematically in the design of the processes as changes occur in the environment of the organization, together with the updates of the applications to support them and integrate them further what has allowed to reduce execution times of activities and make better decisions, although it is not yet possible to integrate all processes through existing IT.	Fully, well-designed, automated and integrated processes contribute incrementally to adding value in the organization.

2.1.3 Ability to respond to changes (ARC). Are the processes flexible and respond to changes and demands of the environment in the short term supported by the IT that supports them?

0	0.1 0.2 0.3	0.4 0.5 0.6	0.7 0.8 0.9	1
No, there is structural inertia, the processes are not prepared to give quick answers, nor they have identified risks in this regard and the IT that support them do not admit immediate modifications.	Some processes have defined possible risks in their risk plan, but they do not indicate how to manage them or how the IT that supports them can contribute to doing so, therefore, the ability to respond only happens accidentaly	The processes have a risk plan defined that includes actions on how to manage changes that are generated unexpectedly and that require a quick solution, but these actions have not been implemented in IT, so the response capacity of the processes is limited for IT disabilities not taken into account in its design or update.	Most processes have a risk plan defined with their actions to manage unexpected changes. IT are updated and prepared to face these changes taking into account the established risk plan. It only works when the changes are internal, not when the changes are external.	All processes have a risk plan defined with their actions to manage unexpected changes. IT are updated and renewed and systematically prepared to face these changes taking into account the established risk plan. The processes are prepared to face the internal and external changes that are generated not affecting their expected performance.

2.2 Strategic Dimension of Information (SDI).

2.2.1 Management of the Relevant Information in the Processes. Is information in the key processes that is important for adding value in products and services identified, selected, used and controlled through existing IT?

0	0.1 0.2 0.3	0.4 0.5 0.6	0.7 0.8 0.9	1
No, existing IT only allow to manage process information without taking into account its relevance.	The existing IT, as well as the current design of the key processes, do not allow to manage the important information, the information required by the rules, regulations and orders of the	The existing IT, as well as the current design of the key processes, allow to manage some important information of the key processes, although the management of	The existing IT, as well as the current design of the key processes allow to manage most of the important information of the key processes, although information that does not provide any	The existing IT, as well as the current design of the key processes allow to manage only important information of the key processes that allow the continuous

	management of the organization is always managed, and others that do not add value. Information management does not contribute to the aggregation of value in products and services.	information predominates that does not provide any value. Information management in general does not contribute to adding value in products and services.	value is still managed. Information management generally contributes little to adding value to products and services.	aggregation of value in the products and services.

2.2.2 Information security (IS). Is valuable information on key and functional processes secured through a computer security management system, and are IT prepared for it?

0	0.1 0.2 0.3	0.4 0.5 0.6	0.7 0.8 0.9	1
No, the information that is generated through the IT is very likely to be acquired by anyone with access to it and even modified and misrepresented.	To some extent, although there is a computer security plan in accordance with resolutions of the Ministry of Information Technology and Communications, the implementation of this plan in key and functional processes is still insufficient, antivirus programs are not effective in the fight against malicious programs and the local network and internet are not protected.	The management of IT security in IT and those that support the key and functional processes is carried out through what is established in the computer security plan, there is within the IT a network vulnerability detection system that is still insufficient, workers are not trained to act adequately against computer attacks and prevent their occurrence.	IT security management is efficiently carried out through the IT that supports the key and functional processes and this is constantly updated, security systems reduce the occurrence of fatal risks to the organization's information, although workers are not prepared to prevent an incident that may threaten the security of information.	IT are integrated into a single technological support that has a security system for all the information generated, based on a strategic plan for information security. There are alliances with organizations that provide information security services that keep information protected, the organization's workers are frequently trained in computer security issues.

2.2.3 Information Integration for strategic decision making (IISDM). Do the IT of the organization allow the efficient integration of the relevant information of the key and functional processes for making appropriate strategic decisions?

0	0.1 0.2 0.3	0.4 0.5 0.6	0.7 0.8 0.9	1
No, Existing IT use different languages, forms and styles to transmit information that is often not important and strategic decision making becomes very difficult. There is duplication of information in the systems that use the key and functional processes.	Existing IT use different languages, forms and styles to convey information about key processes that is sometimes not relevant and strategic decision making becomes very difficult. There is duplication of information in the systems that use the key and functional processes, and it takes many hours of work to gather all the information.	In IT there is a certain homogeneity in the language, forms and styles to transmit and present information on key processes that are sometimes not relevant and not integrated, and makes strategic decisions unfeasible. There is duplication of information in the systems that use the key and functional processes.	In IT there is homogeneity in the language, forms and styles to transmit and present information on key and functional processes, which is almost always relevant but not integrated, which makes strategic decision making difficult. There is duplication of information in the systems that use the key and functional processes.	In IT there is homogeneity in the language, forms and styles to transmit and present information on the key and functional processes that is relevant and integrated, which facilitates the making of appropriate strategic decisions. There is no duplication of information in the systems. The strategic decisions that are made are feasible and do not require much effort.

2.3 Strategic Dimension of Computer Applications (SDCA).

2.3.1 Application structure (AS). Does the design and composition of computer applications, and their updates contribute to facilitate and perform efficient work on key and functional processes?

0	0.1 0.2 0.3	0.4 0.5 0.6	0.7 0.8 0.9	1
The implemented computer applications contribute little to the work in the processes, far from helping, slow down the work and make repeat different activities, are difficult to update and	The implemented computer applications contribute to some extent to the work in the processes, are slow to respond, make repeat different activities, difficult to update and generate chaos and interruptions in the processes frequently;	The computer applications implemented contribute greatly to the work in the processes, allow the work to be a little faster and better than when done manually, they repeat different activities, are difficult to	The computer applications implemented contribute to efficient work in the processes, are updated with some frequency, are flexible to changes and some are obsolete and underutilized.	The computer applications implemented contribute to efficient work in the processes, are systematically updated, which makes them not obsolete, are flexible to changes and are used intensively.

generate chaos and interruptions in the processes frequently, are not flexible and are mostly obsolete.	They are not flexible and some are obsolete and underutilized.	update and generate chaos and interruptions in the processes, sometimes they are not flexible to changes and some are obsolete and underutilized.		

2.3.2 Interoperability level (IL). Do the computer applications of your organization allow the exchange and integrated management of the information needed for the effective operation of the processes?

0	0.1 0.2 0.3	0.4 0.5 0.6	0.7 0.8 0.9	1
No, applications generate information independently and can only be exchanged through email or person to person.	Some applications that support key processes can exchange information between them, which does not manage information in an integrated way, they only generate and store it in existing databases. There is no integration between computer applications, so communication between processes is difficult.	Most applications that support key processes can exchange information between them. Integrated information management is done by some applications in some process activities. There is no integration between computer applications, so communication between processes is difficult.	All applications that support key and functional processes can exchange information between them. Integrated information management is carried out by most applications to process activities. There is little integration between computer applications, so communication between processes is difficult.	The computer applications work under the same technological support that allows the efficient exchange of information and the integrated management of the same automatically, which means that, the update of an information in an application generates the update of the same information in the rest of the applications with which it interacts automatically. There is good communication between key and functional processes through computer applications.

2.3.3 Use of computer applications in processes (UCAP). Are existing computer applications fully utilized for the execution of processes?

0	0.1 0.2 0.3	0.4 0.5 0.6	0.7 0.8 0.9	1
No, there are applications that support the key processes that are underutilized and the workers who use them do not know all their functionalities, which does not allow to speed up the execution of the processes.	Some applications are not well exploited due to ignorance of their functionalities, there are workers who prefer to continue with traditional ways of executing processes without taking into account the benefits of applications to generate value.	They are exploited to some extent, although their functionalities are used they are not integrated, nor is their update oriented in this sense, which causes that they are not exploited to the fullest at least not for the integration of the key and functional processes of the organization.	Work is done to maximize the use of applications and update them when necessary, it is better to invest in use than in new technologies, workers are trained and their use is verified and controlled, although some do not exploit it to the fullest.	The computer applications are integrated on a unique technological support that is fully exploited, this has allowed to generate more and more value in the processes thanks to its efficient use by the workers.

2.4 Strategic Dimension of Technological Infrastructure (SDTI).

2.4.1 Investments in Technological Infrastructure (ITI). Does the process of investment in technological infrastructure (IT) allow to adopt and implement the appropriate technology, while optimizing costs and implementation time?

0	0.1 0.2 0.3	0.4 0.5 0.6	0.7 0.8 0.9	1
No, the investment process is difficult, expensive and widespread over time, the results of which are almost always infrastructures that do not respond to the needs of the organization and do not contribute to meeting the objectives for which they were acquired.	The investment process is very dense, often investing in infrastructure that is not adequate. The implementation process can take years which generates high costs that are not reimbursed.	The available IT technology infrastructures that may be suitable for the organization are analyzed, which the implementation process is difficult, because there is little understanding and communication with the provider organization that generates high costs, and economic technical feasibility studies are not carried	A process for the selection and implementation of the most appropriate IT infrastructure is carried out, although the definitive implementation takes a long time after it is achieved, significant advances in the processes are generated in a first stage, because then problems occur due to risks not taken into	There is a process for investment in IT technology infrastructure based on a technical-economic feasibility study, supported by the current regulations and resolutions that allow the technology to be implemented in accordance with the strategic projection of the organization,

		out , so it is not known with certainty when the investment will return.	account during the process.	optimizing the costs and time of implementation

2.4.2 Use of Technological Infrastructure (UTI).

Is technological infrastructure maximized to support the computer applications of key and functional processes?

0	0.1 0.2 0.3	0.4 0.5 0.6	0.7 0.8 0.9	1
No, the installed technological infrastructure is largely underutilized, computer applications have limited functionalities in correspondence with the support.	The installed technological infrastructure is underutilized to some extent, they only support the computer applications of some key processes. They do not allow integration between them which totally limits integration between key processes.	They are exploited to a large extent, although they fully support computer applications, integration is low for what is required by key processes, and does not exist in the applications of functional processes, which greatly limits integration between key and functional processes.	They are exploited to a large extent, fully support computer applications, integrate with each other, and allow the integration of key processes and some functional processes.	There is a unique technological support that is fully exploited, this has allowed to generate more and more value in the processes thanks to the integration that allows between the key and functional processes.

2.4.3 Integration between technological infrastructure platforms and computer applications. (ITIPCA)

Are the technological infrastructure platforms integrated with the computer applications that they support?

0	0.1 0.2 0.3	0.4 0.5 0.6	0.7 0.8 0.9	1
No, the installed technological infrastructure is disconnected from computer applications, serious problems are generated with their operation due to lack of compatibility.	The installed technological infrastructure is integrated with very few computer applications of the processes. Applications are updated, but not the infrastructure that supports them, which causes frequent problems in the operation of processes.	The installed technological infrastructure is integrated with the computer applications of the key processes. The applications and the infrastructure that supports them are updated to some extent, which causes infrequent problems in the operation of the processes.	The installed technological infrastructure is integrated with the computer applications of the key and functional processes. Applications and most of the infrastructure elements are updated, which causes sporadic problems in the operation of processes.	The installed technological infrastructure is integrated with the computer applications of the key and functional processes. Applications and infrastructure are systematically updated, which increases process performance.

Stage III. Implementation, Supervision and Control (ISC).

3.1 Leadership of the direction (LD). Does senior management as a change agent contribute to organizational development through the leadership of strategic change processes taking IT into account?

0	0.1 0.2 0.3	0.4 0.5 0.6	0.7 0.8 0.9	1
No, senior management, although interested in organizational development, is not able to lead change projects or consider new technologies as tools to increase performance.	Senior management traces and manages the strategic projection of the organization, but without taking into account the necessary technological changes.	Senior management traces and manages the strategic projection of the organization and takes into account the technological changes that are made in the organization, but requests all its management in computer specialists.	Senior management works as a good agent of change and recognizes the need to implement technological changes but is limited to implementing short and medium term actions and not strategic actions in this regard.	The strategic projection of the organization takes into account the improvement of IT in line with the improvement that will be generated in the processes, the management together with IT specialists effectively and efficiently implements these changes.

3.2 Assimilation of Changes by Workers (ACW) Are new strategic changes positively assimilated by managers and workers?

0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
No, workers and managers offer resistance to change at all times which makes implementation difficult.	Managers often do not understand change and lack communication and motivation mechanisms to get workers to assimilate change.			Managers carry out a strategy so that the changes established in the improvement actions program are assimilated by the workers, but this strategy is only effective in some workers and through mechanisms of coercion and not of communication or motivation.			Yes, managers carry out a strategy so that the improvement action program is assimilated by the workers, gradual positive results are achieved through communication activities, although resistance to change persists in some workers.			Managers occupy the role of change agents and through efficient communication methods ensure that workers adapt to change and increase their performance through the use of IT.

3.3 Management of efficiency and effectiveness indicators (MEEI). Do existing IT allow to manage the company's efficiency and effectiveness indicators based on the implementation of the improvement actions program, and finding causes in case of poor performance?

0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
No, existing ITs are only responsible for supporting processes and do not allow to manage efficiency and effectiveness indicators.	To a certain extent, IT allow to manage some indicators of effectiveness of key processes because they are important to verify the operational performance of the organization, but strategic indicators are not managed.			To a large extent, IT allow the management of process efficiency and some efficiency indicators to be managed, but they do not allow the detection of causes or the execution of traceability actions for the search of causes in case there is poor performance of the processes according to the results of the processes indicators.			IT allow to manage all the indicators of efficiency and effectiveness of the organization, both strategic and process, determine the causes in case of low performance and manage solutions to increase such performance, although not in an integrated way.			IT allow to manage in an integrated way the indicators of efficiency and effectiveness of the processes and the strategic ones through an automated dynamic integrated dashboard and control panels that contribute to making good decisions to increase the organization's performance continuously.

3.4 Integration of IT - processes - strategic objectives (IPO). Do IT integrate with the processes and the latter with the strategic objectives of the organization?

0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
No, IT work independently of processes. The processes are not redesigned in order to achieve the strategic objectives of the organization.	To some extent, IT respond to key processes through computer applications, although the processes are carried out independently of the strategic objectives of the organization.			To a large extent, IT respond to processes, although they are not always redesigned to achieve strategic objectives.			IT respond in its entirety to the processes which are updated according to the organization's plans to achieve the strategic objectives.			IT, processes and strategic objectives are harmoniously integrated which allows to generate more value and raise the performance of the organization.

3.5 Value Generation (VG). Does the strategic program implemented contribute to incrementally generate value to processes with IT support?

0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
No, the strategic program instead of contributing to generating value has increased the execution time in the processes, since more activities are carried out, the quality of the products and services is not increased and the relations between the internal and external actors of the organization become very difficult.	To a certain extent, it has been possible to contribute to generating value to the processes through the reduction of their execution time, although their performance does not increase or improve the relations between internal processes and neither of these with external entities, existing IT generally hinder such relationships.			To a large extent, it has contributed to saving time in the processes and eliminating unnecessary activities, although the performance of the processes does not increase at the expected rate. Some IT are contributing to strengthen internal relationships.			It helps to generate value in the processes on an ongoing basis, the relationships between the internal processes are good, but not the relationships with external entities, since IT do not yet strengthen these relationships.			It helps to generate value in processes continuously, the relationships between internal processes are good as well as relationships with external entities, allowing IT to further strengthen the performance of these relationships and therefore the performance of the organization.