Tabla S1a. Description of ISO14001.

Phase	Activity	Subactivity
Context of the organization	EMS1 Understanding the organization and its context	1.1 The organization shall determine external and internal issues that are relevant to its purpose and that affect its ability to achieve the intended outcomes of its EMS
	EMS2 Understanding the needs and expectations of interested parties	2.1 The organization shall determine the interested parties that are relevant to EMS 2.2 The organization shall determine the relevant needs and expectations (i.e. requirements) of these interested parties
	EMS3 Determining of the scope of the Environmental management system (hereinafter, EMS)	3.1 The organization shall determine and document the boundaries and applicability of the EMS to establish its scope
	EMS4 EMS	4.1 The organization shall establish, implement, maintain and continually improve an EMS
Leadership	EMS5 Leadership and commitment	5.1 Top management shall demonstrate leadership and commitment with respect to the EMS by: taking accountability for the effectiveness of the EMS, etc.
	EMS6 Environmental policy	6.1 Top management shall establish, implement and maintain an environmental policy that, within the defined scope of its environmental management system: a) is appropriate to the purpose and context of the organization, including the nature, scale and environmental impacts of its activities, products and services; b) provides a framework for setting environmental objectives; c) includes a commitment to the protection of the environment, including prevention of pollution and other specific commitment(s) relevant to the context of the organization; d) includes a commitment to fulfil its compliance obligations; e) includes a commitment to continual improvement of the environmental management system to enhance environmental performance. The environmental policy shall: — be maintained as documented information; — be communicated within the organization; — be available to interested parties
	EMS7 Organizational roles, responsibilities and authorities	7.1 Top management shall ensure that the responsibilities and authorities for relevant roles are assigned and communicated within the organization
Planning	EMS8 Actions to deal with risks and opportunities	8.1 The organization shall determine the risks and opportunities, related to its environmental aspect and how to deal with them
	EMS9 Significant environmental aspects	9.1 The organization shall determine the environmental aspects of its activities, products and services 9.2 The organization shall determine those aspects that have or can have a significant environmental 9.3 The organization shall determine significant environmental aspects, by using established criteria 9.4 The organization shall communicate and document its significant environmental aspects among the various levels and functions of the organization, as appropriate 9.5 Consider the implications of the organization on its own environmental performance 9.6 Identify and collect quantitative and / or qualitative data on the characteristics of their activities, products or services
	EMS10 Legal requirements	10.1 The organization shall determine and have access to the compliance obligations related to its environmental aspects 10.2 The organization shall determine how these compliance obligations apply to the organization 10.3 The organization shall take these compliance obligations into account when establishing, implementing, maintaining and continually improving its EMS 10.4 Communicate to all people who work in the organization or act on their behalf 10.5 Establish procedures to anticipate and prepare for new or modified requirements. 10.6 Prepare an updated register of applicable legal requirements
	EMS11 Action planning	11.1 Establish implement or maintain plans to address nonconformities and take preventive actions 11.2 Identify nonconformities and take preventive measures to mitigate their impact 11.3 Investigate and determine in order to take actions to prevent environmental impacts 11.4 Evaluate the need for actions to prevent non-conformities
	EMS12 Objectives, environmental goals and programs	12.1 The organization shall establish environmental objectives at relevant functions and levels, taking into account the organization's significant environmental aspects and associated compliance obligations, and considering its risks and opportunities 12.2 Establish rules to measure compliance with the objectives and goals of the EMS 12.3 Documentation and communication of environmental objectives and goals 12.4 State coherent objectives with the environmental policy, including the commitment with the prevention of pollution, compliance with legal requirements and continuous improvement 12.5 Take into account the functions, responsibilities, process, resources, deadlines, priorities and actions necessary to achieve the objectives and goals
	EMS13 Planning of actions to achieve environmental objectives and goals	13.1 Design plans to monitor the progress of objectives and goals 13.2 Establish implement and maintain one or several programs to achieve objectives and goals 13.3 Assignment of responsibilities to achieve the objectives and goals in the relevant functions and levels of the organization 13.4 Establish the means and deadlines to achieve the objectives set forth in the program
Implementation and operation	EMS14 Resources	14.1 The organization shall determine and provide the resources needed for the establishment, implementation, maintenance and continual improvement of the environmental management system. The allocation of resources should be reviewed periodically to ensure their adequacy.
	EMS15 Competence	15.1 The organization shall determine the necessary competence of person(s) doing work under its control that affects its environmental performance and its ability to fulfil its compliance obligations; ensure that these persons are competent on the basis of appropriate education, training or experience 15.2 Determine training needs associated with its environmental aspects and its environmental management system 15.3 Where applicable, take actions to acquire the necessary competence, and evaluate the effectiveness of the actions taken. The organization shall retain appropriate documented information as evidence of competence
	EMS16 Awareness	16.1 The organization shall ensure that persons doing work under the organization's control are aware of: a) the environmental policy; b) the significant environmental aspects and related actual or potential environmental impacts associated with their work; c) their contribution to the effectiveness of the environmental management system, including the benefits of enhanced environmental performance; d) the implications of not conforming with the environmental management system requirements, including not fulfilling the organization's compliance obligations.

Phase			
	EMS17 Communication	17.1 The organization shall establish, implement and maintain the process(es) needed for internal and external communications relevant to the EMS 17.2 The organization shall internally communicate information relevant to the environmental management system among the various levels and functions of the organization, including changes to the environmental management system, as appropriate 17.3 Document communication decision with its external stakeholders 17.4 The organization shall externally communicate information relevant to the environmental management system, as established by the organization's communication process(es) and as required by its compliance obligations 17.5 Establish procedures to receive, document and respond to relevant communications from interested parties	
	EMS18 Documented information	18.1 The organization's EMS shall include documented information required by this International Standard taking into account the policy, objectives and goals 18.2 When creating and updating documented information, the organization shall ensure appropriate: a) identification and description (e.g. a title, date, author, or reference number); b) format (e.g. language, software version, graphics) and media (e.g. paper, electronic); c) review and approval for suitability and adequacy	
	EMS19 Planning and operational control	19.1 Identify and plan operations associated with significant environmental aspects 19.2 Establish, implement and maintain documented procedures to control situations that deviate from the environmental policy, objectives and goals 19.3 Establish operational criteria in the working procedures 19.4 Establish documented procedures for goods and services used by the organization 19.5 Communicate the procedures and requirements to suppliers and contractors	
	EMS20 Preparation and response in case of emergency	20.1 The organization shall establish, implement and maintain the process(es) needed to prepare for and respond to potential emergency situations 20.2 The organization shall prepare to respond by planning actions to prevent or mitigate adverse environmental impacts from emergency situations; respond to actual emergency situations; take action to prevent or mitigate the consequences of emergency situations, appropriate to the magnitude of the emergency and the potential environmental impact 20.3 Periodically review and revise the process(es) and planned response actions, in particular after the occurrence of emergency situations or tests 20.4 Periodically test the planned response actions, where practicable	
Verification	EMS21 Monitoring, measurement, analysis and evaluation	21.1 The organization shall monitor, measure, analyse and evaluate its environmental performance. The organization shall determine: a) what needs to be monitored and measured; b) the methods for monitoring, measurement, analysis and evaluation, as applicable, to ensure valid results; c) the criteria against which the organization will evaluate its environmental performance, and appropriate indicators; d) when the monitoring and measuring shall be performed; e) when the results from monitoring and measurement shall be analysed and evaluated 21.2 The organization shall ensure that calibrated or verified monitoring and measurement equipment is used and maintained, as appropriate	
	EMS22 Assessment of legal compliance	22.1 The organization shall establish, implement and maintain the process(es) needed to evaluate fulfilment of its compliance obligations. The organization shall: a) determine the frequency that compliance will be evaluated; b) evaluate compliance and take action if needed; c) maintain knowledge and understanding of its compliance status. 22.2 The organization shall retain documented information as evidence of the compliance evaluation result(s)	
	EMS23 Internal audit	23.1 The organization shall conduct internal audits at planned intervals 23.2 The organization shall establish, implement and maintain (an) internal audit programme(s), including the frequency, methods, responsibilities, planning requirements and reporting of its internal audits 23.3 The organization shall: a) define the audit criteria and scope for each audit; b) select auditors and conduct audits to ensure objectivity and the impartiality of the audit process; c) ensure that the results of the audits are reported to relevant management.	
	EMS24 Review by management	24.1 Top management shall review the organization's environmental management system, at planned intervals, to ensure its continuing suitability, adequacy and effectiveness 24.2 The organization shall retain documented information as evidence of the results of management reviews 24.3 The outputs of the management review shall include: conclusions on the continuing suitability, adequacy and effectiveness of the environmental management system; decisions related to continual improvement opportunities; decisions related to any need for changes to the environmental management system, including resources; actions, if needed, when environmental objectives have not been achieved; opportunities to improve integration of the environmental management system with other business processes, if needed; any implications for the strategic direction of the organization.	

Continuous improvement	EMS25 Improvement of non-compliance, corrective action	25.1 When a nonconformity occurs, the organization shall:
		a) react to the nonconformity and, as applicable:
		    1) take action to control and correct it;
		    2) deal with the consequences, including mitigating adverse environmental impacts;
		b) evaluate the need for action to eliminate the causes of the nonconformity, in order that it does not recur or occur elsewhere, by:
		    1) reviewing the nonconformity;
		    2) determining the causes of the nonconformity;
		    3) determining if similar nonconformities exist, or could potentially occur;
		c) implement any action needed;
		d) review the effectiveness of any corrective action taken;
		e) make changes to the environmental management system, if necessary.
		
		Corrective actions shall be appropriate to the significance of the effects of the nonconformities encountered, including the environmental impact(s).
		The organization shall retain documented information as evidence of:
		— the nature of the nonconformities and any subsequent actions taken;
		— the results of any corrective action	

	EMS26 Continuous improvement	26.1 Define the EMS 26.2 The organization shall continually improve the suitability, adequacy and effectiveness of the environmental management system to enhance environmental performance	

Tabla S1b. Description of GRI G4.

Phase	General standard contents		Activity
Prepare	Strategy and Analysis	G4-1	Provide a statement from the most senior decision-maker of the organization (such as CEO, chair, or equivalent senior position) about the relevance of sustainability to the organization and the organization's strategy for addressing sustainability. The statement should present the overall vision and strategy for the short term, medium term, and long term, particularly with regard to managing the significant economic, environmental and social impacts that the organization causes and contributes to, or the impacts that can be linked to its activities as a result of relationships with others (such as suppliers, people or organizations in local communities). The statement should include: • Strategic priorities and key topics for the short and medium term with regard to sustainability, including respect for internationally recognized standards and how such standards relate to long term organizational strategy and

		success
		• Broader trends (such as macroeconomic or political) affecting the organization and influencing sustainability priorities
		• Key events, achievements, and failures during the reporting period
		• Views on performance with respect to targets
		• Outlook on the organization's main challenges and targets for the next year and goals for the coming 3–5 years
		• Other items pertaining to the organization's strategic approach
Organizational Profile	G4-2	Provide a description of key impacts, risks, and opportunities. The organization should provide two concise narrative sections on key impacts, risks, and opportunities. Section One should include: A description of the significant economic, environmental and social impacts of the organization, and associated challenges and opportunities. Section Two should focus on the impact of sustainability trends, risks, and opportunities on the longterm prospects and financial performance of the organization
	G4-3	Report the name of the organization.
	G4-4	Report the primary brands, products, and services
	G4-5	Report the location of the organization's headquarters
	G4-6	Report the number of countries where the organization operates, and names of countries where either the organization has significant operations or that are specifically relevant to the sustainability topics covered in the report
	G4-7	Report the nature of ownership and legal form
	G4-8	Report the markets served (including geographic breakdown, sectors served, and types of customers and beneficiaries)
	G4-9	Report the scale of the organization, including: • Total number of employees • Total number of operations • Net sales (for private sector organizations) or net revenues (for public sector organizations) • Total capitalization broken down in terms of debt and equity (for private sector organizations) • Quantity of products or services provided
	G4-10	Report the total number of employees by employment contract and gender. Report the total number of permanent employees by employment type and gender. Report the total workforce by employees and supervised workers and by gender. Report the total workforce by region and gender. Report whether a substantial portion of the organization's work is performed by workers who are legally recognized as self-employed, or by individuals other than employees or supervised workers, including employees and supervised employees of contractors. Report any significant variations in employment numbers (such as seasonal variations in employment in the tourism or agricultural industries)
	G4-11	Report the percentage of total employees covered by collective bargaining agreements
	G4-12	Describe the organization's supply chain
	G4-13	Report any significant changes during the reporting period regarding the organization's size, structure, ownership, or its supply chain, including: • Changes in the location of, or changes in, operations, including facility openings, closings, and expansions • Changes in the share capital structure and other capital formation, maintenance, and alteration operations (for private sector organizations) Changes in the location of suppliers, the structure of the supply chain, or in relationships with suppliers, including selection and termination
	G4-14	Report whether and how the precautionary approach or principle is addressed by the organization
	G4-15	List externally developed economic, environmental and social charters, principles, or other initiatives to which the organization subscribes or which it endorses
	G4-16	List memberships of associations (such as industry associations) and national or international advocacy organizations in which the organization: • Holds a position on the governance body • Participates in projects or committees • Provides substantive funding beyond routine membership dues • Views membership as strategic This refers primarily to memberships maintained at the organizational level
Ethics and Integrity	G4-56	Describe the organization's values, principles, standards and norms of behavior such as codes of conduct and codes of ethics
	G4-57	Report the internal and external mechanisms for seeking advice on ethical and lawful behavior, and matters related to organizational integrity, such as helplines or advice lines
	G4-58	Report the internal and external mechanisms for reporting concerns about unethical or unlawful behavior, and matters related to organizational integrity, such as escalation through line management, whistleblowing mechanisms or hotlines
Identified Material Aspects and ...	G4-18	Explain the process for defining the report content and the Aspect Boundaries. Explain how the organization has implemented the Reporting Principles for Defining Report Content
	G4-22	Report the effect of any restatements of information provided in previous reports, and the reasons for such restatements
Governance	G4-34	Report the governance structure of the organization, including committees of the highest governance body. Identify any committees responsible for decision-making on economic, environmental and social impacts
	G4-35	Report the process for delegating authority for economic, environmental and social topics from the highest governance body to senior executives and other employees
	G4-36	Report whether the organization has appointed an executive-level position or positions with responsibility for economic, environmental and social topics, and whether post holders report directly to the highest governance body
	G4-37	Report processes for consultation between stakeholders and the highest governance body on economic, environmental and social topics. If consultation is delegated, describe to whom and any feedback processes to the highest governance body
	G4-38	Report the composition of the highest governance body and its committees by: Executive or non-executive Independence Tenure on the governance body Number of each individual's other significant positions and commitments, and the nature of the commitments Gender Membership of under-represented social groups Competences relating to economic, environmental and social impacts Ÿ Stakeholder representation
	G4-39	Report whether the Chair of the highest governance body is also an executive officer (and, if so, his or her function within the organization's management and the reasons for this arrangement)
	G4-40	Report the nomination and selection processes for the highest governance body and its committees, and the criteria used for nominating and selecting highest governance body members, including: • Whether and how diversity is considered • Whether and how independence is considered • Whether and how expertise and experience relating to economic, environmental and social topics are considered • Whether and how stakeholders (including shareholders) are involved
	G4-41	Report processes for the highest governance body to ensure conflicts of interest are avoided and managed. Report whether conflicts of interest are disclosed to stakeholders
	G4-42	Report the highest governance body's and senior executives' roles in the development, approval, and updating of the organization's purpose, value or mission statements, strategies, policies, and goals related to economic, environmental and social impacts
	G4-43	Report the measures taken to develop and enhance the highest governance body's collective knowledge of economic, environmental and social topics
	G4-45	Report the highest governance body's role in the identification and management of economic, environmental and social impacts,

			risks, and opportunities. Include the highest governance body's role in the implementation of due diligence processes. Report whether stakeholder consultation is used to support the highest governance body's identification and management of economic, environmental and social impacts, risks, and opportunities
		G4-46	Report the highest governance body's role in reviewing the effectiveness of the organization's risk management processes for economic, environmental and social topics
		G4-47	Report the frequency of the highest governance body's review of economic, environmental and social impacts, risks, and opportunities
		G4-48	Report the highest committee or position that formally reviews and approves the organization's sustainability report and ensures that all material Aspects are covered
		G4-49	Report the process for communicating critical concerns to the highest governance body
		G4-50	Report the nature and total number of critical concerns that were communicated to the highest governance body and the mechanism(s) used to address and resolve them
		G4-51 a	Report the remuneration policies for the highest governance body and senior executives for the below types of remuneration: • Fixed pay and variable pay: – Performance-based pay – Equity-based pay – Bonuses – Deferred or vested shares • Sign-on bonuses or recruitment incentive payments • Termination payments • Clawbacks • Retirement benefits, including the difference between benefit schemes and contribution rates for the highest governance body, senior executives, and all other employees
		G4-52	Report the process for determining remuneration. Report whether remuneration consultants are involved in determining remuneration and whether they are independent of management. Report any other relationships which the remuneration consultants have with the organization
Prepare	Governance	G4-53	Report how stakeholders' views are sought and taken into account regarding remuneration, including the results of votes on remuneration policies and proposals, if applicable
		G4-54	Report the ratio of the annual total compensation for the organization's highest-paid individual in each country of significant operations to the median annual total compensation for all employees (excluding the highest-paid individual) in the same country
		G4-55	Report the ratio of percentage increase in annual total compensation for the organization's highest-paid individual in each country of significant operations to the median percentage increase in annual total compensation for all employees (excluding the highest-paid individual) in the same country
Connect	Identified Material Aspects and	G4-17	List all entities included in the organization's consolidated financial statements or equivalent documents. Report whether any entity included in the organization's consolidated financial statements or equivalent documents is not covered by the report. The organization can report on this Standard Disclosure by referencing the information in publicly available consolidated financial statements or equivalent documents
	Stakeholder Engagement	G4-24	Provide a list of stakeholder groups engaged by the organization
		G4-25	Report the basis for identification and selection of stakeholders with whom to engage
		G4-26	Report the organization's approach to stakeholder engagement, including frequency of engagement by type and by stakeholder group, and an indication of whether any of the engagement was undertaken specifically as part of the report preparation process
		G4-27	Report key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting. Report the stakeholder groups that raised each of the key topics and concerns
Define	Identified Material Aspects and Boundaries	G4-19	List all the material Aspects identified in the process for defining report content
		G4-20	For each material Aspect, report the Aspect Boundary within the organization, as follows: • Report whether the Aspect is material within the organization • If the Aspect is not material for all entities within the organization (as described in G4-17), select one of the following two approaches and report either: – The list of entities or groups of entities included in G4-17 for which the Aspect is not material or – The list of entities or groups of entities included in G4-17 for which the Aspects is material • Report any specific limitation regarding the Aspect Boundary within the organization
		G4-21	For each material Aspect, report the Aspect Boundary outside the organization, as follows: • Report whether the Aspect is material outside of the organization • If the Aspect is material outside of the organization, identify the entities, groups of entities or elements for which the Aspect is material. In addition, describe the geographical location where the Aspect is material for the entities identified • Report any specific limitation regarding the Aspect Boundary outside the organization
		G4-23	Report significant changes from previous reporting periods in the Scope and Aspect Boundaries
Supervise	Governance	G4-44	Report the processes for evaluation of the highest governance body's performance with respect to governance of economic, environmental and social topics. Report whether such evaluation is independent or not, and its frequency. Report whether such evaluation is a self-assessment Report actions taken in response to evaluation of the highest governance body's performance with respect to governance of economic, environmental and social topics, including, as a minimum, changes in membership and organizational practice.
		G4-51 b	Report how performance criteria in the remuneration policy relate to the highest governance body's and senior executives' economic, environmental and social objectives
Report	Report Profile	G4-28	Reporting period (such as fiscal or calendar year) for information provided
		G4-29	Date of most recent previous report (if any)
		G4-30	Reporting cycle (such as annual, biennial)
		G4-31	Provide the contact point for questions regarding the report or its contents
		G4-32	Report the 'in accordance' option the organization has chosen Report the GRI Content Index for the chosen option (see tables below) Report the reference to the External Assurance Report, if the report has been externally assured. GRI recommends the use of external assurance but it is not a requirement to be 'in accordance' with the Guidelines
		G4-33	Report the organization's policy and current practice with regard to seeking external assurance for the report If not included in the assurance report accompanying the sustainability report, report the scope and basis of any external assurance provided Report the relationship between the organization and the assurance providers. Report whether the highest governance body or senior executives are involved in seeking assurance for the organization's sustainability report

Tabla S1c. Description of EMAS.

Phase	Activity	Subactivity
1. Environmental analysis	1. Description of the organization	1.1.1 Obtain information regarding the organization
	1.2 Legal requirements	1.2.1 Identify legal requirements and others
	1.3 Direct and indirect environmental aspects	1.3.1 Indicate direct and indirect environmental aspects
	1.4 Criteria for the evaluation of significant environmental aspects	1.4.1 Establish criteria to evaluate the significant nature of environmental aspects
	1.5 Practices and procedures	1.5.1 Establish environmental management practices and procedures
	1.6 Evaluation of previous incidents	1.6.1 Obtain information from investigations of previous incidents with environmental repercussions
2. Development and application of an EMS	2.1 Environmental policy	2.1.1 Top management shall define the organisation's environmental policy
	2.2 Planning — 2.2.1 Environmental aspects	2.2.1.1 Identify the environmental aspects of its activities, products and services 2.2.1.2 Determine those aspects that have or can have significant impact(s) on the environment (i.e. significant environmental aspects) 2.2.1.3 The organisation shall document this information and keep it up to date 2.2.1.4 The organisation shall ensure that the significant environmental aspects are taken into account in establishing, implementing and maintaining its environmental management system
	2.2.2 Legal and other requirements	2.2.2.1 Identify and have access to the applicable legal requirements and other requirements to which the organisation subscribes related to its environmental aspects 2.2.2.2 Determine how these requirements apply to its environmental aspects 2.2.2.3 The organisation shall ensure that these applicable legal requirements and other requirements to which the organisation subscribes are taken into account in establishing, implementing and maintaining its environmental management system
	2.2.3 Objectives and goals	2.2.3.1 The organisation shall establish, implement and maintain documented environmental objectives and goals, at relevant functions and levels within the organisation 2.2.3.2 The objectives and goals shall be measurable, where practicable, and consistent with the environmental policy, including the commitments to prevention of pollution, to compliance with applicable legal requirements and with other requirements to which the organisation subscribes, and to continual improvement 2.2.3.3 When establishing and reviewing its objectives and targets, an organisation shall take into account the legal requirements and other requirements to which the organisation subscribes, and its significant environmental aspects. It shall also consider its technological options, its financial, operational and business requirements, and the views of interested parties
	2.2.4 Programme(s)	2.2.4.1 The organisation shall establish, implement and maintain a programme(s) for achieving its objectives and goals
	2.3 Implementation and operation — 2.3.1 Resources, roles, responsibility and authority	2.3.1.1 Management shall ensure the availability of resources essential to establish, implement, maintain and improve the environmental management system. Resources include human resources and specialised skills, organisational infrastructure, technology and financial resources 2.3.1.2 Roles, responsibilities and authorities shall be defined, documented and communicated in order to facilitate effective environmental management 2.3.1.3 The organisation's top management shall appoint a specific management representative(s) who, irrespective of other responsibilities, shall have defined roles, responsibilities and authority
	2.3.2 Employee involvement	2.3.2.1 The organisation should acknowledge that active employee involvement is a driving force and a prerequisite for continuous and successful environmental improvements as well as being a key resource in the improvement of environmental performance as well as the right method to anchor the environmental management and audit system in the organisation in a successful way
	2.3.3 Competence, training and awareness	2.3.3.1 The organisation shall ensure that any person(s) performing tasks for it or on its behalf that have the potential to cause a significant environmental impact(s) identified by the organisation is (are) competent on the basis of appropriate education, training or experience, and shall retain associated records 2.3.3.2 The organisation shall identify training needs associated with its environmental aspects and its environmental management system. It shall provide training or take other action to meet these needs, and shall retain associated records 2.3.3.3 The organisation shall establish, implement and maintain a procedure(s) to make persons working for it or on its behalf aware
	2.3.4 Communication	2.3.4.1 The organisation shall establish, implement and maintain a procedure(s) for: (a) internal communication among the various levels and functions of the organisation; (b) receiving, documenting and responding to relevant communication from external interested parties. The organisation shall decide whether to communicate externally about its significant environmental aspects, and shall document its decision. If the decision is to communicate, the organisation shall establish and implement a method(s) for this external communication
	2.3.5 Documentation	2.3.5.1 The environmental management system documentation shall include: (a) the environmental policy, objectives and targets; (b) description of the scope of the environmental management system; (c) description of the main elements of the environmental management system and their interaction, and reference to related documents; (d) documents, including records, required by this International Standard; and (e) documents, including records, determined by the organisation to be necessary to ensure the effective planning, operation and control of processes that relate to its significant environmental aspects.
	2.3.6 Control of documents	2.3.6.1 The organisation shall establish, implement and maintain a procedure(s) to (a) approve documents for adequacy prior to issue; (b) review and update as necessary and re-approve documents, (c) ensure that changes and the current revision status of documents are identified; (d) ensure that relevant versions of applicable documents are available at points of use
	2.3.7 Operational control	2.3.7.1 The organisation shall identify and plan those operations that are associated with the identified significant environmental aspects consistent with its environmental policy, objectives and targets, in order to ensure that they are carried out under specified condition
	2.3.8 Emergency preparedness and response	2.3.8.1 The organisation shall establish, implement and maintain a procedure(s) to identify potential emergency situations and potential accidents that can have an impact(s) on the environment and how it will respond to them 2.3.8.2 The organisation shall respond to actual emergency situations and accidents and prevent or mitigate associated adverse environmental impacts 2.3.8.3 The organisation shall periodically review and, where necessary, revise its emergency preparedness and response procedures, in particular, after the occurrence of accidents or emergency situations 2.3.8.4 The organisation shall also periodically test such procedures where practicable

Phase	Activity	Subactivity	Description
	2.4 Verification and corrective action	2.4.1 Monitoring and measurement	2.4.1.1 The organisation shall establish, implement and maintain a procedure(s) to monitor and measure, on a regular basis, the key characteristics of its operations that can have a significant environmental impact 2.4.1.2 The organisation shall ensure that calibrated or verified monitoring and measurement equipment is used and maintained and shall retain associated records
		2.4.2 Evaluation of compliance	2.4.2.1 The organisation shall establish, implement and maintain a procedure(s) for periodically evaluating compliance with applicable legal requirements. 2.4.2.2 The organisation shall keep records of the results of the periodic evaluations
		2.4.3 Non-conformity, corrective action and preventive action	2.4.3.1 The organisation shall establish, implement and maintain a procedure(s) for dealing with actual and potential non-conformity(ies) and for taking corrective action and preventive action
		2.4.4 Control of records	2.4.4.1 The organisation shall establish and maintain records as necessary to demonstrate conformity to the requirements of its environmental management system and of this International Standard, and the results achieved 2.4.4.2 The organisation shall establish, implement and maintain a procedure(s) for the identification, storage, protection, retrieval, retention and disposal of records. Records shall be and remain legible, identifiable and traceable
		2.4.5 Internal audit	2.4.5.1 The organisation shall ensure that internal audits of the environmental management system are conducted at planned intervals
	2.5 Management review		2.5.1 Top management shall review the organisation's environmental management system, at planned intervals, to ensure its continuing suitability, adequacy and effectiveness. Reviews shall include assessing opportunities for improvement and the need for changes to the environmental management system, including the environmental policy and environmental objectives and targets
3. Environmental Declaration	3.1 Prepare the Environmental Declaration		3.1.1 Prepare a communication document to inform the interested parties of applicable aspects regarding the environment
4. Verification of the System and validation of the environmental declaration	4.1 Initial / renewal audit (Phase I).		4.1.1 Provide information to the environmental verifier regarding the environmental statement, policy, etc.
	4.2 Initial / renewal audit (Phase II)		4.2.1 On-site verification by the environmental verifier
	4.3 Intermediate follow-up audits		4.3.1 The verifier will issue an audit report and, where appropriate, it will be necessary to prepare a corrective action plan (PAC) by the Organization. The final agreement will resolve about maintaining the certification and validating the updated environmental statement directly or, where appropriate, subject to an extraordinary audit or about the temporary suspension or withdrawal or reduction of the scope of the certification
5. Registry EMAS	5.1 Registration to the EMAS register		5.1.1 Register to the EMAS register
	5.2 Maintenance of the EMAS registry		5.2.1 Prepare an updated environmental statement annually
	5.3 Renewal of the EMAS registry		5.3.1 Request the renewal of the EMAS registration every three years

Tabla S1d. Description of SGE21.

Phase	Activity	Subactivity
1. Sensitization to Management	1.1 Loyal Competition	1.1.1 The organization must respect the Intellectual Property of their competitors, and will not use undue actions to obtain information about them and will not disseminate false or biased information against them. In case of differences or disputes in this sense, agreements amongst the parties and arbitration formulas must be promoted as means of resolutions 1.1.2 The organization will maintain records of claims and specifics requirements related to competitors and the measures undertaken in this regard
2. Initial Analysis	2.1 Quality and Excellence	2.1.1 The organization must guarantee its activity is developed in accordance with the highest quality standards For this, the organization must undertake the following actions: a) Publicly communicate, at the top management level, its commitment in regards to quality b) Provide information to all those individuals working in the organization, or on its behalf, the defined quality principles, while also providing training for those that due to their working filed have a greater incidence in the quality of the product or service provided by the organization c) Conduct evaluations of client satisfaction, analyze the results and elaborate action plans for improvement d) Whenever defects or flaws in the product or the service might be detected, the client must be informed and the necessary repair and reposition measures will be implemented
	2.2 Legal and normative compliance	2.2.1 The organization will guarantee the control and compliance with the legal requirements that affect its activity, including general and local legislation as well as sector-specific regulations, especially in social, labour and environmental standards. For this, the organization will remain updated in the identification of the applicable legislation, establishing a compliance system and measure to prevent crimes
	2.3 Transparency of the information	2.3.1 The organization must publish their annual account making them publicly available
	2.4 Security of the information	2.4.1 Guarantee the security of the information that is used by your stakeholders
	2.5 Responsible purchasing	2.5.1 The organization must define criteria for responsible purchasing in regards to social, environmental and good governance, best practices that are achievable and go beyond the applicable legal obligations
	2.6 Responsible information of products and services	2.6.1 The organization must present at all times clear and honest information about its products and services in its communication to clients. To do this, it has to supervise and guarantee that the following aspects are complied with: a) Clear and unmistakable identification of the product and service b) Commercial offer, including the final price, payment and delivery conditions c) Technical specification of the product or service in regards to recommendations, risks, and impacts on health, safety and the environment as well as the use and conservation conditions

3. Study of interest groups and relationships	3.1 Stakeholder engagement	3.1.1 Identify and classify stakeholder groups 3.1.2 Adopt a methodology to detect their expectations 3.1.3 Design and prioritize action plans and communications with them 3.1.4 Maintain evidences of the results of the developed actions
	3.2 Transparency with the environment	3.2.1 Ensure transparency in its activity with respect to stakeholders
	3.3 Cooperation and alliances	3.3.1 The organization must promote the development of associations and forums that serve the common interest and that become platforms for exchange of experiences with competitors as well as common cooperation channels to ensure an improvement in corporate responsible management and leadership in regards to sustainable development. The organization must maintain evidences of the main actions undertaken, identifying the individual or department in charge of leading the relationship as well as its results and obtained achievements
	3.4 Collaboration with the Administrators	3.4.1 Implement dialogue and communication channels with the Administrators
4. Development of Policies and Code	4.1 Social responsibility policy	4.1.1 The organization will define and maintain a Social responsibility Policy. This policy should: a) Include the commitment to integrated social, environmental, ethical and good governance aspects in the operations and strategy. The objective of this commitment should be to maximize the positive impact on stakeholders b) Be approved by the organization at the highest level of the organization c) Be communicated to all individuals that work for the organization or in its name d) Be publicly available
	4.2 Anticorruption Policy	4.2.1 The organization must define a policy to fight corruption, which, among others, should include: a) Measure to eradicate the practices associated with bribery and extortion b) Criteria for the receipt and issuing of gifts c) Processes for the detection and limitation of conflict of interests d) Feedback and guidance mechanisms on business conduct for employees e) Speak up systems to report misconduct The organization must guarantee that all individuals with decision-making capacity are aware and understand the policy. Evidences regarding the undertaken measures in case of noncompliance must be maintained
	4.3 Responsible marketing and advertising	4.3.1 The organization must establish principles that guide their actions in marketing and advertising in respect of the promotion of their product or service
	4.4 Code of Conduct	4.4.1 The organization will elaborate a Code of Conduct, which should: a) Be specific and coherent with its values while developing and detailing the Social Responsibility Policy b) Be approved at the highest level of the organization c) Define the channels and adequate ways to resolve questions, complains and suggestions about aspects related to the Ethical and Socially Responsible Management of the organization. These channels should guarantee the absence of possible retaliations regarding its use as well as in the following up of registered incidences d) Establish sanctions applicable in case of lack of compliance e) Be known and understood by all the individuals that work for the organization or in its name 4.4.2 The organization must define the mechanisms that facilitate the review, update and compliance with this code.
	4.5 Coordinator of social responsibility/ethical management	4.5.1 The organization will name a coordinator of the Ethical and Socially Responsible Management System
	4.6 Good Governance, ownership and management	4.6.1 The relationship of the organization with its investors must follow the principles of transparency, loyalty and sustainable value creation. For this, it should develop a formal protocol for investor relations or a Good Governance Code, which must be available to them
5. Documentary Development	5.1 Objectives and Indicators	5.1.1 Prepare a Social Responsibility Plan with measurable, comparable and verifiable objectives. Said plan must incorporate the responsibilities, execution deadlines and applicable resources 5.1.2 Evaluate compliance with the plan
	5.2 Ethical and Socially Responsible Management Committee	5.2.1 Write the documentation of the ethical and socially responsible management system
	5.3 Identification of activities and impacts	5.3.1 The organization must take into account the impact of their processes, activities, products and services have or could have on the environment in which it operates, including its supply chain. For this, the organization must identify and evaluate those aspects related to its operations as well as the significant impacts over the environment, with the objective of managing and minimizing them
	5.4 Evaluation System	5.4.1 The organization must periodically evaluate and rank its suppliers in terms of relevance for its business activity. This ranking must determine the actions that are taken in regards to follow-up and control of suppliers
	5.5 Measurement and evaluation of social impact	5.5.1 The organization must take into account the repercussions that its business processes, projects and activities have on the communities where it operates. For this, it must identify and evaluate its current and potential social impacts, negative and positive, as well as well as develop action plans and concrete measures for each
	5.6 Risk management	5.6.1 The organization must conduct an identification, analysis and categorization of the main ESG risks that affect it which shall be reviewed annually 5.6.2 Design and develop a mitigation plan for these risks 5.6.3 Measure the efficiency of the actions developed in this regards
	5.7 Environmental communication	5.7.1 Report on environmental aspects
	5.8 Climate change strategy	5.8.1 The organization must commit in a concrete manner to fighting climate change. For this, it has to define a strategy that is adequate to the significant aspects and impacts identified in the organization, through which it should implement concrete actions to reduce GEI emissions. Evidences of the obtained results must be maintained
	5.9 Environmental management program	5.9.1 The organization must establish an operational and specific environmental management program for its working facilities that is aligned and coherent with its environmental commitment and its social responsibility plan. This program must include objectives and measurable indicators that allow for the adequate monitoring as well as prevent and manage the produced impacts of its activities and processes 5.9.2 This program must be revised annually and when there are any changes within the organization that could affect the current identification
	5.10 Social Responsibility and Communication Report	5.10.1 Make the report of Social Responsibility, including the profile of the organization; the strategy and management of Social Responsibility; the mechanisms of dialogue with the groups of interest and the main economic, social and environmental indicators 5.10.2 Disseminate said report and present it every two years
	5.11 Responsible innovation	5.11.1 The organization shall provide responsible and competitive products and services. For this, it should include in the design and development, environmental, social and good governance related aspects for the promotion of responsible innovation
	5.12 Social action	5.12.1 Prepare a report annually in case of taking any social action
6. Preparation of a Strategic	6.1 CSR strategic plan	6.1.1 Prepare a strategic map, identify the objectives of each area, cost and implementation period

Plan in CSR

7. Training and awareness	7.1 Promote good practices, support measures and improvement	7.1.1 Establish clear and honest information of your commercial offer
	7.2 Have channels for conflict resolution	7.2.1 Establish mechanisms to address complaints, denounce and resolve conflicts within the organization
8. Implementation of the EMS	8.1 Deployment in the field	8.1.1 Identify the aspects that affect the daily performance of workers, document these aspects
9. Audit, monitoring of results and improvement actions	9.1 Accessibility	9.1.1 Promote your products, services through identification
	9.2 Monitoring and evaluation	9.2.1 The organization should annually undertake an internal audit of the Ethical and Socially Responsible Management System to ensure the correct application and evolution of the system
	9.3 Present Report on environmental aspects	9.3.1 Make a report to have evidence of the environmental study
	9.4 Review by management and continous improvement	9.4.1 The highest representative of the organization must review the Ethical and Socially Responsible Management System at least annually to ensure its correctness and efficiency, through follow-up indicators and the elaboration of continuous improvement plans

Tabla S1e. Description of ISO26000.

Phase	Activity
1. Company or Organization	1.1 Establish Activities Schedule
	1.2 Define the Purpose of the organization
	1.3 Analyze and define the scope of the organization
2. Recognition of environmental responsibility	2.1 Recognize the interested parties and their interests
	2.2 Identify the activities of the organization and interested parties
	2.3 Identify applicable laws and regulations
	2.4 Review the degree of compliance with respect to environmental laws
	2.5 Disclose the relationship between the interests of the interested parties and the organization, as well as their degree of compliance with the laws
3. Contamination prevention	3.1 To improve the prevention of pollution from its activities, an organization should: − identify the aspects and impacts of its decisions and activities on the surrounding environment
	3.2 identify the sources of pollution and waste related to its activities
	3.3 Systematically identify and avoid the use: Of banned chemicals defined by national law or of unwanted chemicals listed in international conventions; and where possible, of chemicals identified by scientific bodies or any other stakeholder with reasonable and verifiable grounds as being of concern
	3.4 Measure and record significant sources of contamination and their risks in the environment
	3.5 Implement measures to progressively reduce and minimize direct and indirect pollution within its control or influence, in particular through development and promotion of fast uptake of more environmentally friendly products and services
	3.6 Establish and implement accident prevention programs
	3. Inform about significant sources of contamination, risks and measures taken
4. Sustainable use of resources	4.1 In relation to all its activities an organization should: − identify the sources of energy, water and other resources used
	4.2 Measure, record and report on its significant uses of energy, water and other resources
	4.3 Implement resource efficiency measures to reduce its use of energy, water and other resources, considering best practice indicators and other benchmarks
	4.4 Complement or replace non-renewable resources where possible with alternative sustainable, renewable and low-impact sources; − use recycled materials and reuse water as much as possible; − manage water resources to ensure fair access for all users within a watershed; − promote sustainable procurement; − consider adopting extended producer responsibility; and − promote sustainable consumption
	4.5 Establish evaluation schemes to promote sustainable procurement
	4.6 Inform about the use of natural resources, impacts and measures adopted
5. Mitigation of climate change and adaptation to it	5.1.1 To mitigate climate change impacts related to its activities an organization should: − identify the sources of direct and indirect accumulated GHG emissions and define the boundaries (scope) of its responsibility
5.1 Mitigation	5.1.2 Measure, record and report on its significant GHG emissions, preferably using methods well defined in internationally agreed standards
	5.1.3 Implement optimized measures to progressively reduce and minimize the direct and indirect GHG emissions within its control and encourage similar actions within its sphere of influence
	5.1.4 Review the quantity and type of significant fuels usage within the organization and implement programmes to improve efficiency and effectiveness. A life cycle approach should be undertaken to ensure net reduction in GHG emissions, even when low-emissions technologies and renewable energies are considered
	5.1.5 Realize energy savings wherever possible in the organization, including purchasing of energy efficient goods and development of energy efficient products and services

		5.1.6 Report GHG emissions in the organization and the measures adopted
	5.2 Adaptation	5.2.1 To reduce vulnerability to climate change, an organization should: – consider future global and local climate projections to identify risks and integrate climate change adaptation into its decision making; – identify opportunities to avoid or minimize damage associated with climate change and where possible take advantage of opportunities, to adjust to changing conditions
		5.2.2 Implement measures to respond to existing or anticipated impacts and within its sphere of influence, contribute to building capacity of stakeholders to adapt.
6. Environmental Protection		6.1 Identify potential adverse impacts on biodiversity and ecosystem services and take measures to eliminate or minimize these impacts
		6.2 Establish and implement an integrated strategy for the administration of land, water and ecosystems that promotes conservation and sustainable use in a socially equitable way
		6.3 Incorporate the protection of natural habitat, wetlands, forest, wildlife corridors, protected areas and agricultural lands into the development of buildings and construction works
		6.4 Implement planning, design and operating practices as a way to minimize the possible environmental impacts resulting from its decisions on land use, including decisions related to agricultural and urban development
		6.5 Inform the results and the measures taken before the analysis of the possible affected ecosystems
7. Monitoring and control		7.1 Perform performance monitoring reports on environmental responsibility issues
		7.2 Obtain verification of the information obtained by the interested parties and expose the points that are not covered

Tabla S2a. Description of Cobit5.

PROCESS EDM01: " Ensure Governance Framework Setting and Maintenance "

Analyse and articulate the requirements for the governance of enterprise IT, and put in place and maintain effective enabling structures, principles, processes and practices, with clarity of responsibilities and authority to achieve the enterprise's mission, goals and objectives

Governance Practice	Activity
Evaluate	ITG1 Analyse and identify the internal and external environmental factors (legal, regulatory and contractual obligations) and trends in the business environment that may influence governance design
	ITG2 Determine the significance of IT and its role with respect to the business
	ITG3 Consider external regulations, laws and contractual obligations and determine how they should be applied within the governance of enterprise IT.
	ITG4 Align the ethical use and processing of information and its impact on society, natural environment, and internal and external stakeholder interests with the enterprise's direction, goals and objectives.
	ITG5 Determine the implications of the overall enterprise control environment with regard to IT
	ITG6 Articulate principles that will guide the design of governance and decision making of IT
	ITG7 Understand the enterprise's decision-making culture and determine the optimal decision-making model for IT
	ITG8 Determine the appropriate levels of authority delegation, including threshold rules, for IT decisions.
Direct	ITG9 Communicate governance of IT principles and agree with executive management on the way to establish informed and committed leadership
	ITG10 Establish or delegate the establishment of governance structures, processes and practices in line with agreed-on design principles
	ITG11 Allocate responsibility, authority and accountability in line with agreed-on governance design principles, decision-making models and delegation
	ITG12 Ensure that communication and reporting mechanisms provide those responsible for oversight and decision-making with appropriate information
	ITG13 Direct that staff follow relevant guidelines for ethical and professional behaviour and ensure that consequences of non-compliance are known and enforced
	ITG14 Direct the establishment of a reward system to promote desirable cultural change
Monitor	ITG15 Assess the effectiveness and performance of those stakeholders given delegated responsibility and authority for governance of enterprise IT
	ITG16 Periodically assess whether agreed-on governance of IT mechanisms (structures, principles, processes, etc.) are established and operating effectively
	ITG17 Assess the effectiveness of the governance design and identify actions to rectify any deviations found
	ITG18 Maintain oversight of the extent to which IT satisfies obligations (regulatory, legislation, common law, contractual), internal policies, standards and professional guidelines
	ITG19 Provide oversight of the effectiveness of, and compliance with, the enterprise's system of control
	ITG20 Monitor regular and routine mechanisms for ensuring that the use of IT complies with relevant obligations (regulatory, legislation, common law, contractual), standards and guidelines

PROCESS EDM02 "Ensure Benefits Delivery"

Optimise the value contribution to the business from the business processes, IT services and IT assets resulting from investments made by IT at acceptable costs

Governance Practice	Activity
Evaluate	ITG21. Understand stakeholder requirements; strategic IT issues, such as dependence on IT; and technology insights and capabilities regarding the actual and potential significance of IT for the enterprise's strategy
	ITG22 Understand the key elements of governance required for the reliable, secure and cost-effective delivery of optimal value from the use of existing and new IT services, assets and resources
	ITG23 Understand and regularly discuss the opportunities that could arise from enterprise change enabled by current, new or emerging technologies, and optimise the value created from those opportunities
	ITG24 Understand what constitutes value for the enterprise, and consider how well it is communicated, understood and applied throughout the enterprise's processes
	ITG25 Evaluate how effectively the enterprise and IT strategies have been integrated and aligned within the enterprise and with enterprise goals for delivering value
	ITG26 Understand and consider how effective current roles, responsibilities, accountabilities and decision-making bodies are in ensuring value creation from IT-enabled investments, services and assets
	ITG27 Consider how well the management of IT-enabled investments, services and assets aligns with enterprise value management and financial management practices
	ITG28 Evaluate the portfolio of investments, services and assets for alignment with the enterprise's strategic objectives; enterprise worth, both financial and non-financial; risk, both delivery risk and benefits risk; business process alignment; effectiveness in terms of usability, availability and responsiveness; and efficiency in terms of cost, redundancy and technical health
Direct	ITG29 Define and communicate portfolio and investment types, categories, criteria and relative weightings to the criteria to allow for overall relative value scores
	ITG30 Define requirements for stage-gates and other reviews for significance of the investment to the enterprise and associated risk, programme schedules, funding plans, and the delivery of key capabilities and benefits and ongoing contribution to value
	ITG31 Direct management to consider potential innovative uses of IT that enable the enterprise to respond to new opportunities or challenges, undertake new business, increase competitiveness, or improve processes
	ITG32 Direct any required changes in assignment of accountabilities and responsibilities for executing the investment portfolio and delivering value from business processes and services

	ITG33 Define and communicate enterprise-level value delivery goals and outcome measures to enable effective monitoring
	ITG34 Direct any required changes to the portfolio of investments and services to realign with current and expected enterprise objectives and/or constraints
	ITG35 Recommend consideration of potential innovations, organisational changes or operational improvements that could drive increased value for the enterprise from IT-enabled initiatives
Monitor	ITG36 Define a balanced set of performance objectives, metrics, targets and benchmarks. Metrics should cover activity and outcome measures, including lead and lag indicators for outcomes, as well as an appropriate balance of financial and non-financial measures. Review and agree on them with the IT and other business functions, and other relevant stakeholders
	ITG37 Collect relevant, timely, complete, credible and accurate data to report on progress in delivering value against targets. Obtain a succinct, high-level, all-around view of portfolio, programme and IT (technical and operational capabilities) performance that supports decision making, and ensure that expected results are being achieved
	ITG38 Obtain regular and relevant portfolio, programme and IT (technological and functional) performance reports. Review the enterprise's progress towards identified goals and the extent to which planned objectives have been achieved, deliverables obtained, performance targets met and risk mitigated
	ITG39 Upon review of reports, take appropriate management action as required to ensure that value is optimised
	ITG40 Upon review of reports, ensure that appropriate management corrective action is initiated and controlled

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PROCESS EDM03 "Ensure Risk Optimisation"
Ensure that the enterprise's risk appetite and tolerance are understood, articulated and communicated, and that risk to enterprise value related to the use of IT is identified and managed

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Governance Practice	Activity
Evaluate	ITG41 Determine the level of IT-related risk that the enterprise is willing to take to meet its objectives (risk appetite)
	ITG42 Evaluate and approve proposed IT risk tolerance thresholds against the enterprise's acceptable risk and opportunity levels
	ITG43 Determine the extent of alignment of the IT risk strategy to enterprise risk strategy
	ITG44 Proactively evaluate IT risk factors in advance of pending strategic enterprise decisions and ensure that risk-aware enterprise decisions are made
	ITG45 Determine that IT use is subject to appropriate risk assessment and evaluation, as described in relevant international and national standards.
	ITG46 Evaluate risk management activities to ensure alignment with the enterprise's capacity for IT-related loss and leadership's tolerance of it
Direct	ITG47 Promote an IT risk-aware culture and empower the enterprise to proactively identify IT risk, opportunity and potential business impacts
	ITG48 Direct the integration of the IT risk strategy and operations with the enterprise strategic risk decisions and operations
	ITG49 Direct the development of risk communication plans (covering all levels of the enterprise) as well as risk action plans
	ITG50 Direct implementation of the appropriate mechanisms to respond quickly to changing risk and report immediately to appropriate levels of management, supported by agreed-on principles of escalation (what to report, when, where and how)
	ITG51 Direct that risk, opportunities, issues and concerns may be identified and reported by anyone at any time. Risk should be managed in accordance with published policies and procedures and escalated to the relevant decision makers
	ITG52 Identify key goals and metrics of risk governance and management processes to be monitored, and approve the approaches, methods, techniques and processes for capturing and reporting the measurement information
Monitor	ITG53 Monitor the extent to which the risk profile is managed within the risk appetite thresholds
	ITG54 Monitor key goals and metrics of risk governance and management processes against targets, analyse the cause of any deviations, and initiate remedial actions to address the underlying causes
	ITG55 Enable key stakeholders' review of the enterprise's progress towards identified goals.
	ITG56 Report any risk management issues to the board or executive committee

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PROCESS EDM04 "Ensure Resource Optimisation"
Ensure that adequate and sufficient IT-related capabilities (people, process and technology) are available to support enterprise objectives effectively at optimal cost.

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Governance Practice	Activity
Evaluate	ITG57 Examine and make judgement on the current and future strategy, options for providing IT resources, and developing capabilities to meet current needs and future needs (including sourcing options)
	ITG58 Define the principles for guiding the allocation and management of resources and capabilities so that IT can meet the needs of the enterprise, with the required capability and capacity according to the agreed-on priorities and budgetary constraints
	ITG59 Review and approve the resource plan and enterprise architecture strategies for delivering value and mitigating risk with the allocated resources
	ITG60 Understand requirements for aligning resource management with enterprise financial and human resources (HR) planning.
	ITG61 Define principles for the management and control of the enterprise architecture
Direct	ITG62 Communicate and drive the adoption of the resource management strategies, principles, and agreed-on resource plan and enterprise architecture strategies
	ITG63 Assign responsibilities for executing resource management
	ITG64 Define key goals, measures and metrics for resource management
	ITG65 Establish principles related to safeguarding resources
	ITG66 Align resource management with enterprise financial and HR planning
Monitor	ITG67 Monitor the allocation and optimisation of resources in accordance with enterprise objectives and priorities using agreed-on goals and metrics
	ITG68 Monitor IT sourcing strategies, enterprise architecture strategies, IT resources and capabilities to ensure that current and future needs of the enterprise can be met
	ITG69 Monitor resource performance against targets, analyse the cause of deviations, and initiate remedial action to address the underlying causes

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PROCESS EDM05 "Ensure Stakeholder Transparency"
Ensure that enterprise IT performance and conformance measurement and reporting are transparent, with stakeholders approving the goals and metrics and the necessary remedial actions

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Governance Practice	Activity
Evaluate	ITG70 Examine and make a judgement on the current and future mandatory reporting requirements relating to the use of IT within the enterprise (regulation, legislation, common law, contractual), including extent and frequency
	ITG71 Examine and make a judgement on the current and future reporting requirements for other stakeholders relating to the use of IT within the enterprise, including extent and conditions
	ITG72 Maintain principles for communication with external and internal stakeholders, including communication formats and communication channels, and for stakeholder acceptance and sign-off of reporting
Direct	ITG73 Direct the establishment of the communication strategy for external and internal stakeholders
	ITG74 Direct the implementation of mechanisms to ensure that information meets all criteria for mandatory IT reporting requirements for the enterprise
	ITG75 Establish mechanisms for validation and approval of mandatory reporting
	ITG76 Establish reporting escalation mechanisms
Monitor	ITG77 Periodically assess the effectiveness of the mechanisms for ensuring the accuracy and reliability of mandatory

		reporting
		ITG78 Periodically assess the effectiveness of the mechanisms for, and outcomes from, communication with external and internal stakeholders
		ITG79 Determine whether the requirements of different stakeholders are met

Tabla S2b. Description of ISO38500.

Principle	Task	Activity
Responsability	Direct	ITG1 Governing bodies should direct that strategies be followed according to the assigned IT responsibilities
		ITG2 Governing bodies should direct that they receive the information that they need to meet their responsibilities and accountability
	Monitor	ITG3 Governing bodies should monitor that appropriate mechanisms for governance of IT are established
		ITG4 Governing bodies should monitor that those given responsibility acknowledge and understand their responsibilities
		ITG5 Governing bodies should monitor the performance of those given responsibility in the governance of IT
	Evaluate	ITG6 Governing bodies should evaluate the options for assigning responsibilities in respect of the organization's current and future use of IT
		ITG7 Governing bodies should evaluate the competence of those given responsibility to make decisions regarding IT
Strategy	Direct	ITG8 Governing bodies should direct the preparation and use of strategies and policies that ensure the organization does benefit from developments in IT
		ITG9 Governing bodies should also encourage the submission of proposals for innovative uses of IT that enable the organization to respond to new opportunities or challenges, undertake new businesses or improve processes
	Monitor	ITG10 Governing bodies should monitor the progress of approved IT proposals
		ITG11 Ensure that they are achieving objectives in required timeframes
		ITG12 Using allocated resources
		ITG13 Governing bodies should monitor the use of IT to ensure that it is achieving its intended benefits
	Evaluate	ITG14 Governing bodies should evaluate developments in IT and business processes to ensure that IT will provide support for future business needs
		ITG15 When considering plans and policies, the governing body should evaluate the use of IT and IT activities to ensure they align with the organization's objectives and satisfy key legitimate stakeholder requirements
		ITG16 The governing body should also take into consideration good practices
		ITG17 Evaluate the satisfaction of the interested parties
		ITG18 Governing bodies should ensure that the use of IT is subject to appropriate risk management
Acquisition	Direct	ITG19 Activos TI se adquiridos apropiadamente Governing bodies should direct that IT assets (systems and infrastructure) be acquired in an appropriate manner
		ITG20. Including the preparation of suitable documentation, while ensuring that required capabilities are provided
		ITG21 Governing bodies should direct that supply arrangements (including both internal and external supply arrangements) support the business needs of the organization
		ITG22 Governing bodies should direct that their organization and suppliers develop a shared understanding of the organization's intent in making any IT acquisition
	Monitor	ITG23 Governing bodies should monitor IT investments to ensure that they provide the required capabilities
		ITG24 Governing bodies should monitor the extent to which their organization and suppliers maintain the shared understanding of the organization's intent in making any IT acquisition
	Evaluate	ITG25 Evaluate IT alternatives
		ITG26 Evaluate the needs of approved proposals
		ITG27 Risk / value analysis
		ITG28 Evaluate the profitability of the proposed Investments
Performance	Direct	ITG29 Governing bodies should ensure allocation of sufficient resources so that IT meets the needs of the organization
		ITG30. Identify the agreed priorities and budgetary constraints
		ITG31 Governing bodies should direct those responsible to ensure that IT supports the organization
		ITG32 IT supports the organization, when required for business reasons, with correct and up-to-date data that is protected from loss or misuse
	Monitor	ITG33 Governing bodies should monitor the extent to which IT supports the business
		ITG34 Governing bodies should monitor the extent to which allocated resources and budgets are prioritised according to business objectives
		ITG35 Governing bodies should monitor the extent to which the policies, such as for data accuracy are followed properly
		ITG36 Governing bodies should monitor the extent to which the policies, such as the efficient use of IT, are followed properly
	Evaluate	ITG37 Governing bodies should evaluate the plans proposed by the managers to ensure that IT will support business processes with the required capability and capacity
		ITG38 The organization and the treatment of risk associated with the use of IT
		ITG39 Governing bodies should evaluate the risks to the integrity of information and the protection of IT assets, including associated intellectual property and organizational memory
		ITG40 Governing bodies should evaluate options for assuring effective, timely decisions about use of IT in support of business goals
		ITG41 Governing bodies should regularly evaluate the effectiveness and performance of the organization's governance of IT
Conformance	Direct	ITG42 Governing bodies should direct those responsible to establish regular and routine mechanisms for ensuring that the use of IT complies with relevant obligations, internal policies, standards and guidelines
		ITG43 Governing bodies should direct that policies are established and enforced to enable the organization to meet its internal obligations in its use of IT
		ITG44 Governing bodies should direct that IT staff follow relevant guidelines for professional behaviour and development
		ITG45 Governing bodies should direct that all actions relating to IT be ethical
	Monitor	ITG46 Governing bodies should monitor IT compliance and conformance through appropriate reporting and audit practices
		ITG47 Ensuring that reviews are timely, comprehensive, and suitable for the evaluation of the extent of satisfaction of the organization
		ITG48 Governing bodies should monitor IT activities, including disposal of assets and data, to ensure that environmental, privacy, strategic knowledge management, preservation of organizational memory and other relevant obligations are met
	Evaluate	ITG49 Governing bodies should regularly evaluate the extent to which IT satisfies obligations (regulatory, legislation, contractual), internal policies, standards and professional guidelines
		ITG50 Governing bodies should regularly evaluate the organization's internal conformance to its framework for governance of IT
Human	Direct	ITG51 Governing bodies should direct that IT activities are consistent with identified human behaviour

Behaviour		ITG52 Governing bodies should direct that risks, opportunities, issues and concerns may be identified and reported by anyone at any time
		ITG53 These risks should be managed in accordance with published policies
		ITG54 Procedures and escalated to the relevant decision makers
	Monitor	ITG55 Governing bodies should monitor IT activities to ensure that identified human behaviours remain relevant and that proper attention is given to them
		ITG56 Governing bodies should monitor work practices to ensure that they are consistent with the appropriate use of IT.
	Evaluate	ITG57 Governing bodies should evaluate IT activities to ensure human behaviours
		ITG58 Governing bodies should evaluate IT activities identifying appropriate behavior

Tabla S2c. Description of framework Peter Weill and Jeanne W. Ross.

Component	Activity
1. The strategy of the company and the organization	1.1 Build excellence in each of the business lines
	1.2 Provide integrated solutions for customers
	1.3 Improve the eficiency
	1.4 Benefit from the economies of scale
	1.5 Develop the culture 'a company-a team'
	1.6 Increase transparency and accountability
2. The IT organization and the desirable behavior	2.1 Develop the only business unit implemented (appl)
	2.2 Create a shared infrastructure
	2.3 Simplify the firmware architecture to facilitate sharing, integration and reuse
	2.4 Apply project management techniques and standards including Six Sigma
3. IT governance or decision making agreements	3.1 Define IT Principles
	3.2 Define IT Architecture
	3.3 Define IT infrastructure strategies
	3.4 Define Needs of business applications
	3.5 Define IT investments
4. IT Governance Mechanisms	4.1 Decision Making Structure (Business Monarchy │ Federalism, IT Monarchy, Duopoly)
	4.2 Alignment Processes (IT Investment Approval Processes, Architectural Exception Process, Service Level Agreements, Chergeback, Project Tracking, Formal Business Value Tracking)
	4.3 Communication Approaches. This encompasses the announcements, advocates, channels, and education efforts that disseminate the policies, governance principles, and outcomes of the decision-making processes
5. The business performance objectives	5.1 Different parameters for each business unit
	5.2 New language and culture
6. IT Parameters and Accountability	6.1 Budget process of 'Shrink to increase'
	6.2 Different parameters for each business unit
	6.3 ROI (return on investments)
	6.4 Reduction in the number of IT products used and elimination of non-approved products
	6.5 Certification in project methodology