VOLUNTARY INSTRUMENTS FOR THE MITIGATION OF CLIMATE CHANGE

FIDES

DURBAN

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AENOR 25 años más empresas más competitivas

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1. AENOR

AENOR Task

AENOR is a private, independent, non-profit making Spanish Body, recognised at national, European and International levels. Through the development of Standardisation and Certification *(S+C)* activities, it contributes to the improvement of quality in enterprises, their products and services, as well as to the protection of the environment and thus to the well-being of the society.

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1. AENOR

CE

Spanish Association for Standardization and Certification

Private, independent, nonprofit Entity

ACTIVITIES

Elaborate national technical standards *(UNE)* and participate in the development of international standards.

Certify products, services and companies *(Management systems)*

Entity designated by the Spanish Ministry of Industry and Energy *(RD 1614/1985)*, as an entity to develop the activities of N + C. Recognized as Standardization body and to act as a Certification body *(RD 2200/1995)*

AENOR ◁ HAR ▷

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1. AENOR International Presence

Standardisation

International Standardisation organisation *(ISO)*

Standardisation European Committe *(CEN)*

International Electro-technique Commission *(IEC)*

European Committee for Electro-technique Standardisation *(CENELEC)*

Pan-American Commission for Technique standardisation *(COPANT)*

European Institute for Telecommunications Standardisation *(ETSI)*

Certification

Certification World Net *(IQNet)*

Eco-label World Net *(GEN)*

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1. AENOR Relevance Figures

Quality

26.720 Certificates ISO 9000
1.480 Certificates OHSAS 18001

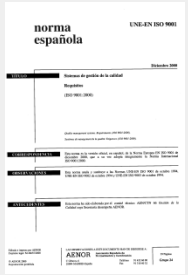
Environment

6.960 Certificates ISO 14000
631 Certificates EMAS
75 Certificates SGE

Product

More than 92.000 Certificates

Standardisation



29.000 Standards *(UNE and Ratified)*

International

More than 45 International agreements for Systems certification

More than 43 Countries where AENOR has granted certificates

Human Resources

More than 500 Auditors

Climate Change

More than 300 CDM, JI and voluntary projects
More than 40 Carbon footprint

1. AENOR Institutional

-AENOR is accredited by UNFCCC, as the Spanish Designated Operational Entity (DOE), for all sectoral scopes (15) on which there are methodologies for CDM projects (Clean Development Mechanism).

- AENOR is accredited by UNFCC as EIA (Accredited Independent Entity) for all sectoral scopes (15) to determine and verify projects of joint implementation (JI).

- AENOR has agreements with VCS (Verified Carbon Standard) and Gold Standard Foundation to validate and verify voluntary projects to reduce emissions with those references.

- AENOR is accredited by ENAC to verify GHG emissions in aviation sector and in all facilities included in the National Allocation Plan For Emission Allowances of the European System of Emissions Trading.

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1. AENOR Institutional

-AENOR has been validated and verified CDM projects in Central and South America, Africa and Asia, has determined and verified JI projects in countries of Eastern Europe and verified voluntary projects in America, Africa and Asia.

-Currently has acted in over 300 projects.

- AENOR verifies 50-60% of all installations covered by the National Allocation Plan For Emission Allowances of the European System of Emissions Trading and is currently checking Airlines which is the new sector incorporated.

- AENOR is a member of IETA (International Emission Trading Association)

- AENOR is a member of D.I.A (DOE'S Association)

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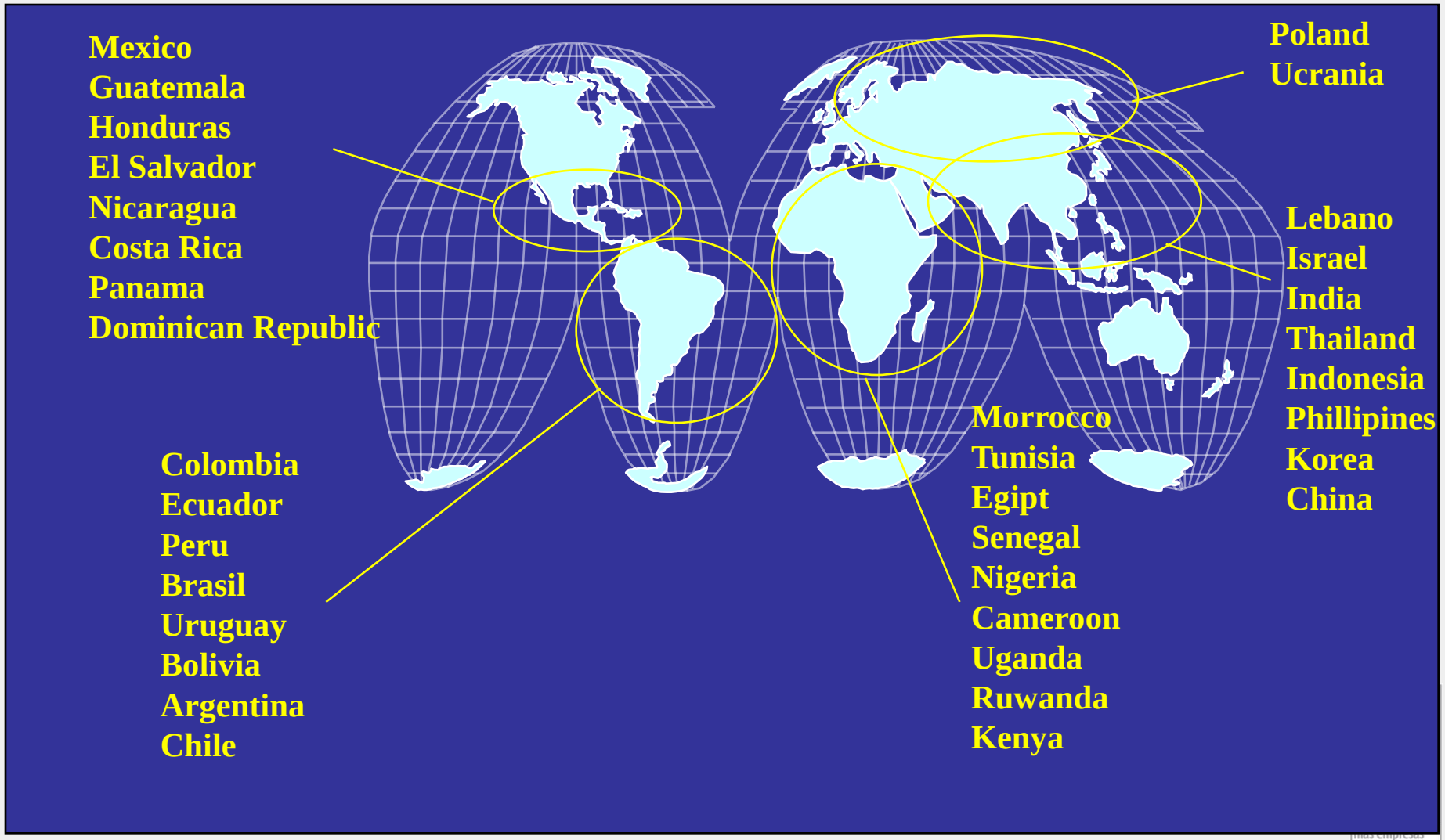
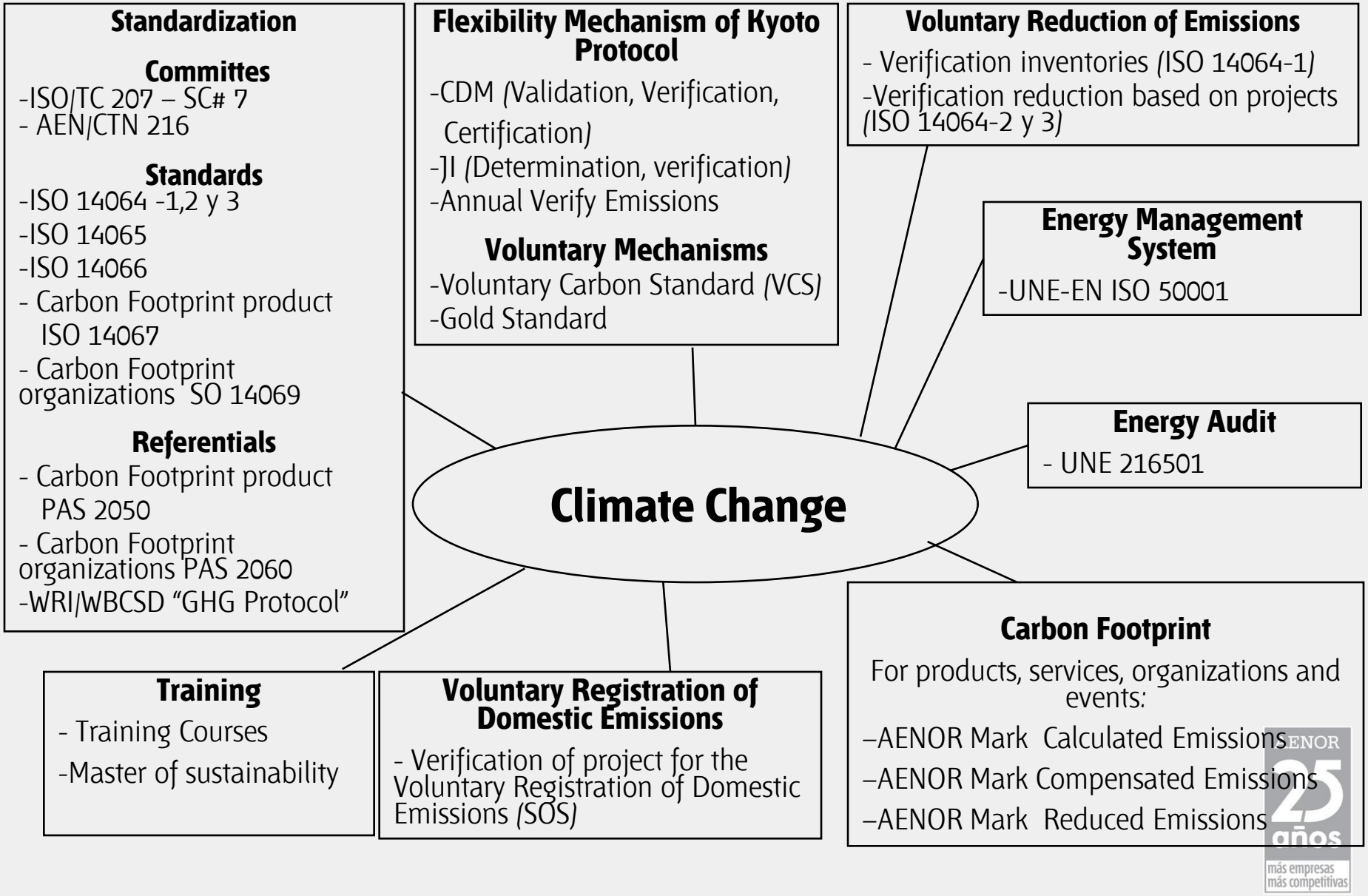
1. AENOR Institutional

Countries where AENOR acts in climate change



1. AENOR performance in climate change Area



2. ISO SYSTEM FOR THE MITIGATION OF CLIMATE CHANGE

Quantifying GHG Emissions and reporting Environmental Impacts

ISO/TC 207 was established in 1993, as a result of ISO's commitment to respond to the complex challenge of "sustainable development" articulated at the 1992 United Nations Conference on Environment and Development in Rio de Janeiro

2. ISO Strategy for Climate Change

- In the CAG meeting will be held in Madrid from 11-13, January 2012 will be approved the ISO Strategy For Climate Change.

- ISO's vision is to be the world's leading provider of high quality, globally relevant international standards. ISO aims to promote and facilitate the creation of standards that support developing and developed countries in meeting their commitments to the goals of the United Nations Framework Convention of Climate Change *(*UNFCCC*)* approved at the UNFCCC meeting in Cancun in December 2010 *(*or as they may be subsequently revised by that body*)*.

2. ISO Strategy for Climate Change

- Broadly, ISO will promote and facilitate international standardization in the climate change arena that are consistent with the principles of sustainable development and that will allow countries and organizations to monitor, report and verify climate change indicators and outcomes, and to also implement GHG reduction and climate change mitigation strategies.

2. ISO Strategy for Climate Change

- In order to implement these above-listed methods for promoting and facilitating international standardization in the climate change arena, ISO will empanel a Climate Change Executive Committee *(*CCEC*)* with appropriate terms of reference. The Committee shall have proper authority to act under the relevant ISO Operational Rules and will report twice yearly to the ISO Council. Membership on this Committee will be drawn from developing and developed countries from all regions of the world; its leader to be chosen during the first duly scheduled meeting. The Committee will develop its own action plan for implementing the above methods and may from time to time and with approval of the ISO Council suggest revisions to its terms of reference that are consistent with the intent of this ISO Strategy.

2. ISO SYSTEM FOR THE MITIGATION OF CLIMATE CHANGE

Before the constitution of the WG#5 and WG#6 of ISO/TC 207, ISO conducted various studies to determine the desirability of standardization in the field of climate change.

After the adoption of the Kyoto Protocol in 1997, was formed the WG#5 which is the first Working Group in ISO done standards on Climate Change.

The ISO Business Plan Task Force (chair by José Luis TEJERA, AENOR) in its meeting in Berlin in 2007, laid the groundwork for the constitution of the SC#7 of ISO/TC 207 (Greenhouse gas management and related activities.

2. Standards elaborated by ISO/TC 207 SC#7

- **ISO 14064-1:2006** specifies principles and requirements at the organization level for quantification and reporting of greenhouse gas (GHG) emissions and removals. It includes requirements for the design, development, management, reporting and verification of an **organization's GHG inventory**

2. Standards elaborated by ISO/TC 207 SC#7

- **ISO 14064-2:2006** specifies principles and requirements and provides guidance at the **project level** for quantification, monitoring and reporting of activities intended to cause greenhouse gas *(GHG)* emission reductions or removal enhancements. It includes requirements for **planning a GHG project, identifying and selecting GHG sources, sinks and reservoirs relevant to the project and baseline scenario, monitoring, quantifying, documenting and reporting GHG project performance and managing data quality**

2. Standards elaborated by ISO/TC 207 SC#7

- **ISO 14064-3:2006** specifies principles and requirements and provides guidance for **those conducting or managing the validation and/or verification of greenhouse gas *(GHG)* assertions.** It can be applied to organizational or GHG project quantification, including GHG quantification, monitoring and reporting carried our in accordance with ISO 14064-1 or ISO 14064-2.

Species requirements for selecting GHG validators/verifiers, establishing the level of assurance, objectives, criteria and scope, determining the validation/verification approach, assessing GHG data, information, information systems and controls, evaluating GHG assertions and preparing validation/verification statements.

2. Standards elaborated by ISO/TC 207 SC#7

- **ISO 14065:2007** specifies principles and requirements **for bodies that undertake validation or verification of greenhouse gas *(GHG)* assertions.**

It is GHG programme neutral. If a GHG programme is applicable, the requirements of that GHG programme are additional to the requirements of ISO 14065:2007

- ISO 14066:2010 on competency requirements for greenhouse gas validators and verifiers

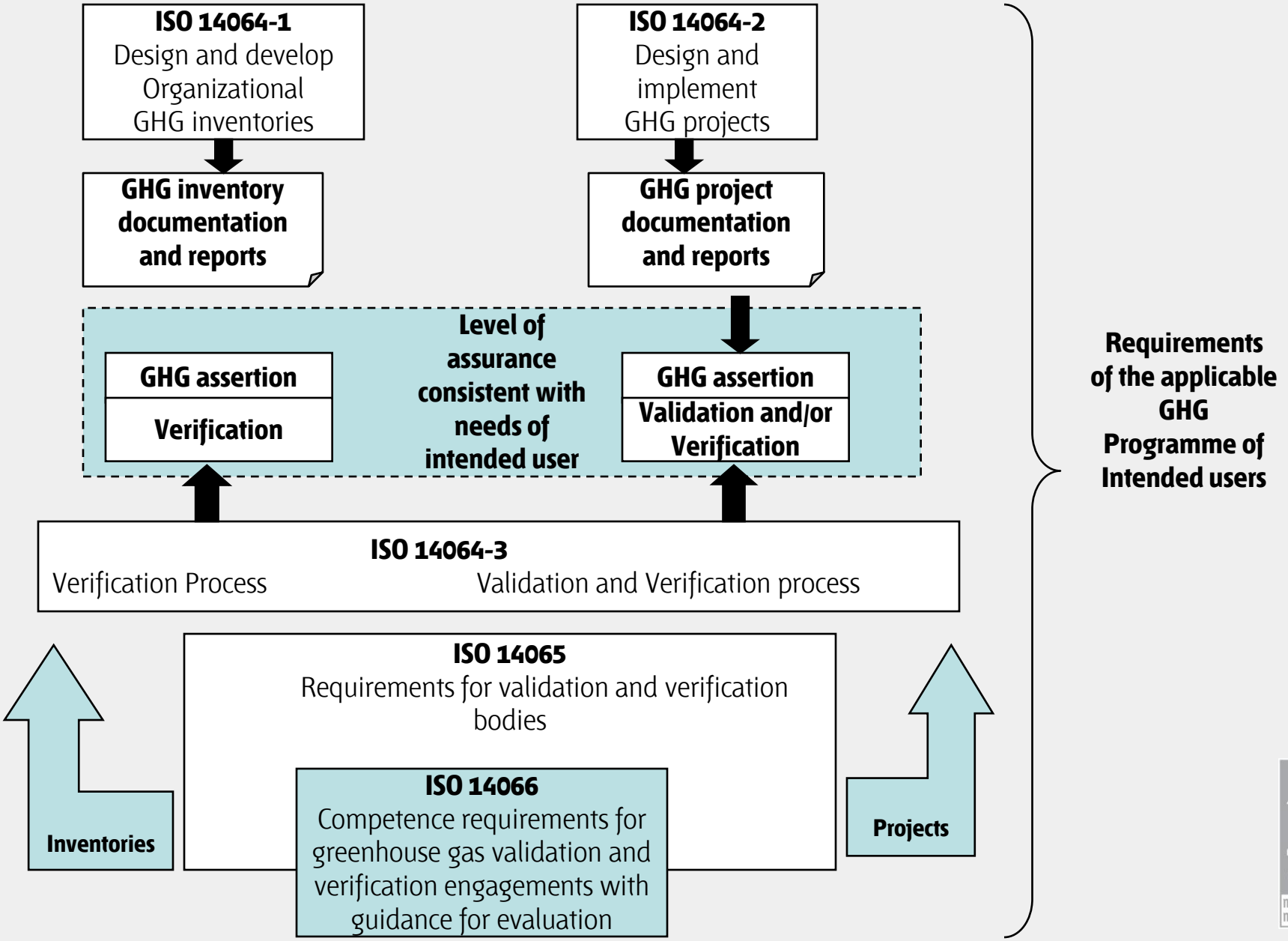
2. ISO/TC 207 SC# 7- standards in elaboration

- **ISO/WD 14067** on carbon footprint of products
  - **Part 1:** Quantification
  - **Part 2:** Communication

In the ISO/TC 207, Leon *(México)* - June 2010, this standards become ISO/DIS.

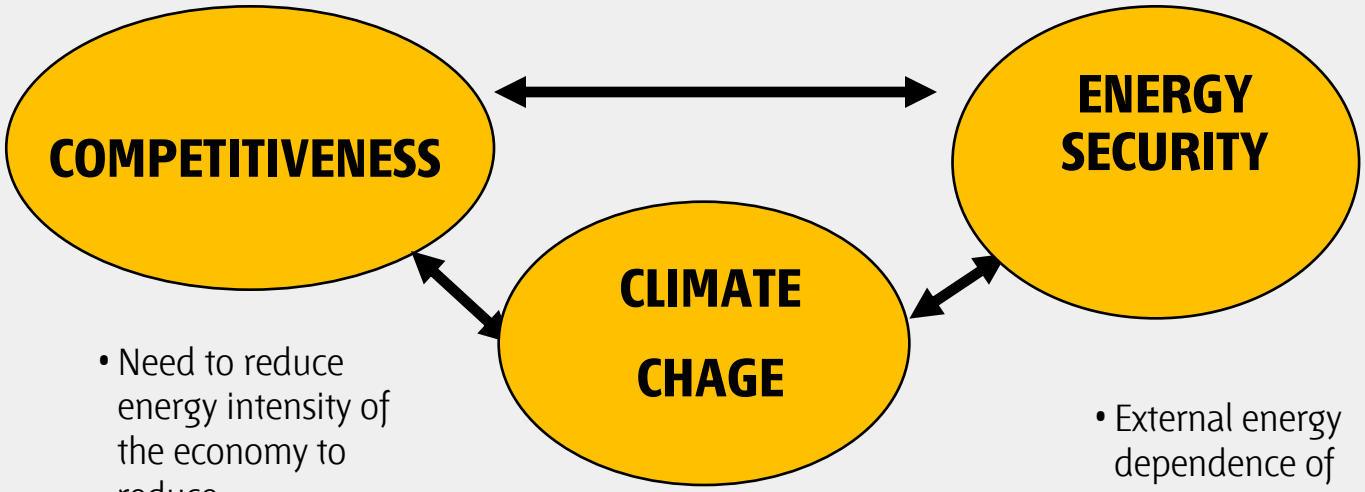
After the ISO/TC, Oslo *(Norway)*.-June 2011, this standard is still ISO/DIS.

2. Relationship between ISO 14064, ISO 14065 and ISO 14066



3. Energy model

The energy model is facing challenges of climate change, energy security and competitiveness



- Need to reduce energy intensity of the economy to reduce vulnerability to price shocks

- The trend increase in emissions will produce a temperature rise exceeding 2 to 4 degrees by the end of the century.

- External energy dependence of 81% in Spain.
- Volatility in energy prices.
- Political instability in the origin of supplies

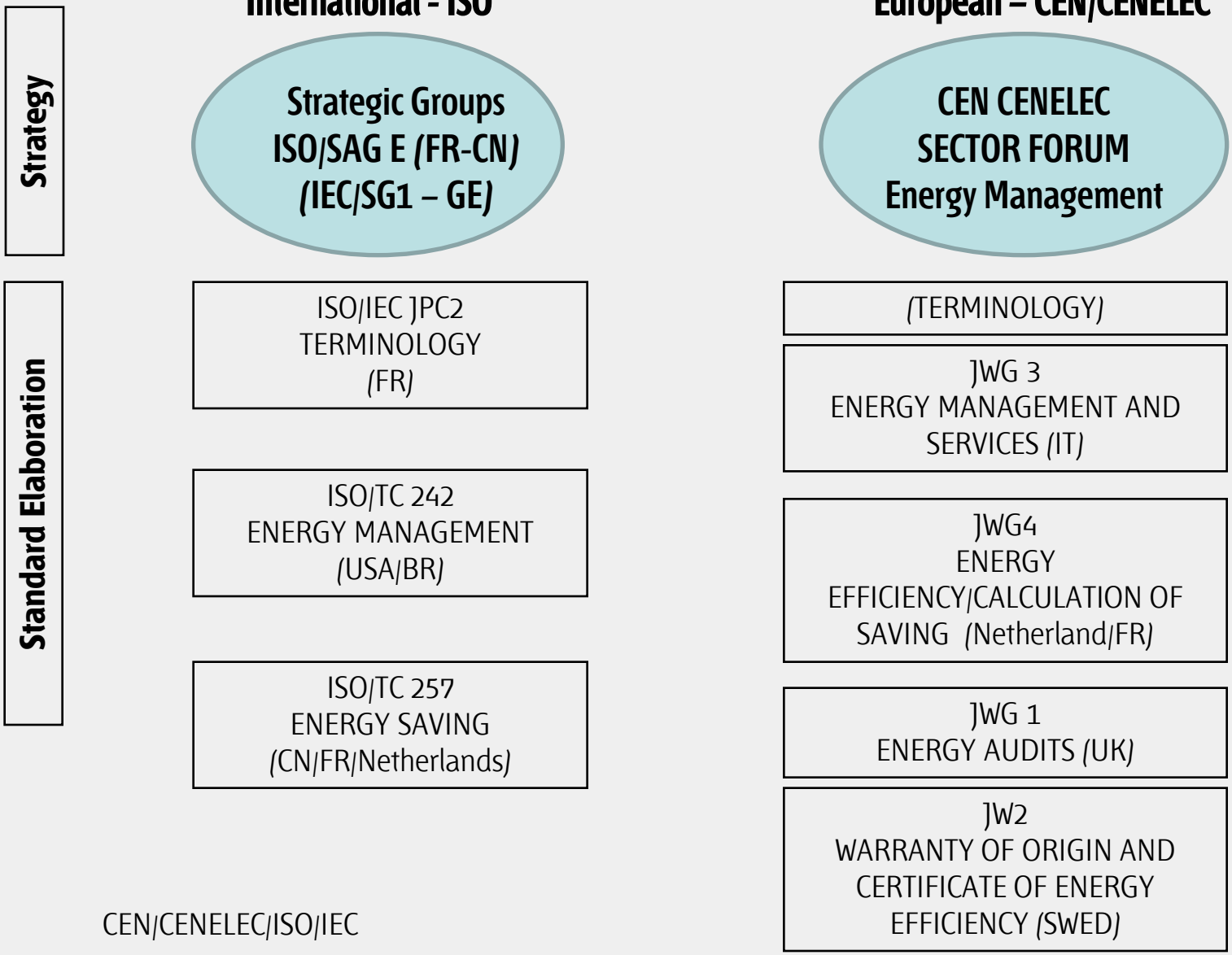
3. Challenges of Climate Change

EU ENERGY CONTEXT
Strategy 20-20-20

OBLIGATIONS FOR THE YEAR 2020

- Mandatory 20% contribution of renewable energy
- 20% reduction in energy consumption
- 20% reduction of GHG emissions in
- 2020 compared to 1990 levels

3. International framework



3. Energy Management Systems

CONTROL MECHANISMS AND ENERGY EVALUATION

MANDATORY

Building
- Royal Decree 47/2007 new buildings
- Royal Decree existing buildings *(draft)*

VOLUNTEERS

- UNE EN ISO 50001 Energy Management Systems
- UNE 216.501 Energy Audit
- Other models

Legislation:
- Industrial safety
- CTE, RITE, COGENERACIÓN, EuP, Interruptibility, etc...

3. Standard UNE 216501. Requirements

Preparation

- Technical Scope
- Physical Sphere
- Communication channels
- Work schedule
- Planning measurements in situ

Inspect the facilities on a field visit

- Condition of installations
- Analysis of energy supplies.
- The criteria of choice and use

Data Collection

- Electrical Energy, Fuels
- Energy self-production
- Other energy sources
- Production process
- Horizontal Technologies and services
- Measurement and data collection

Energy Accounting

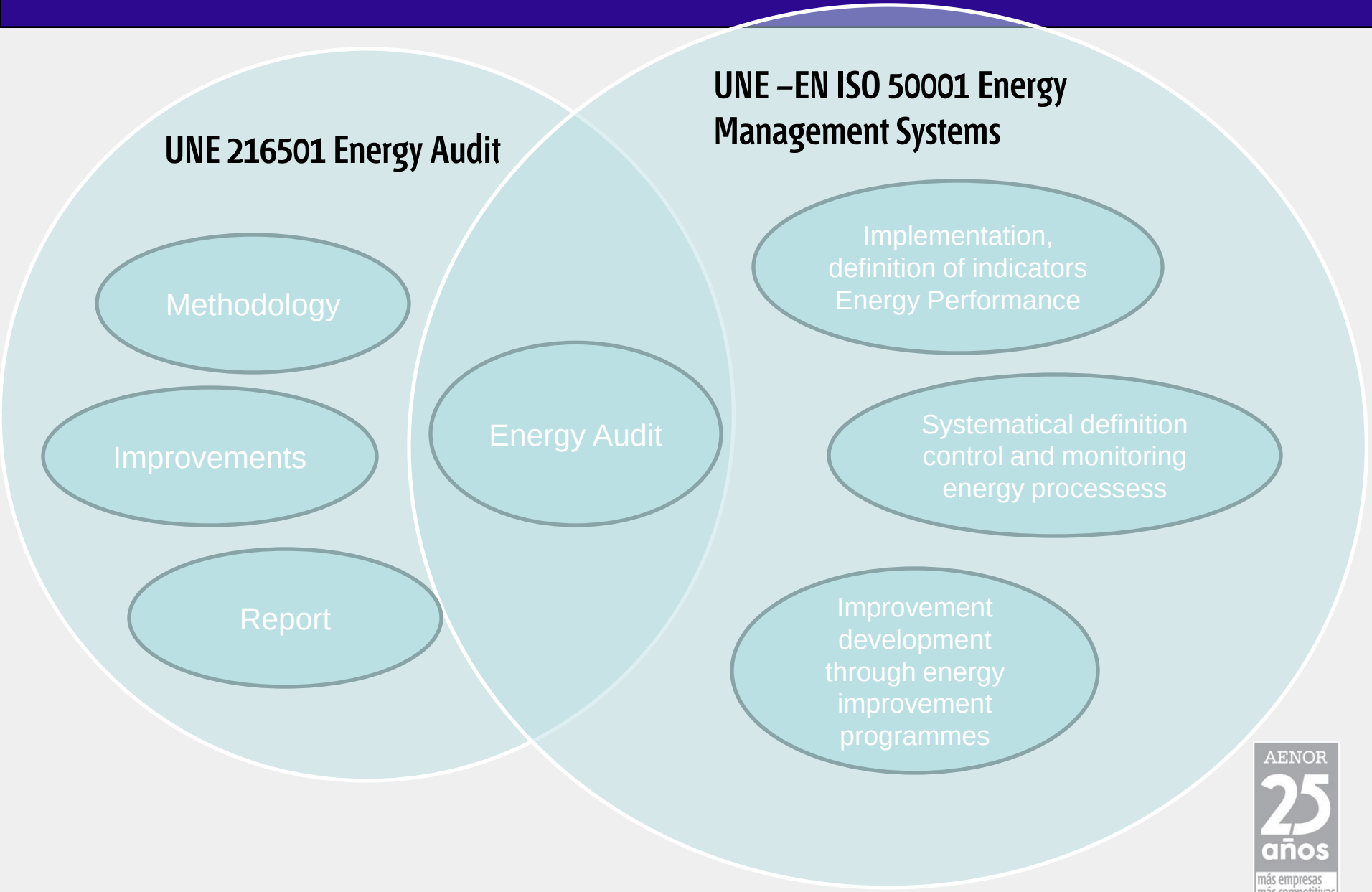
- Energy Generation, consumption rates and annual associated costs, fuels
- Energy balance for the previous consumption rates according to types of installations
- A time profile of consumption, average price
- Generation, consumption ratios and/or specific consumption rates
- Analysis of proposals for improvement, development of improvements, concatenation of improvements
- Recommendations and best practices

Proposals for improvement

Final Report

- Purpose and scope
- Methodology, general aspects
- Condition of installations.
- Energy accounting
- Analysis of proposals for improvement

3. Relation between UNE-EN ISO 50001 and UNE 216501

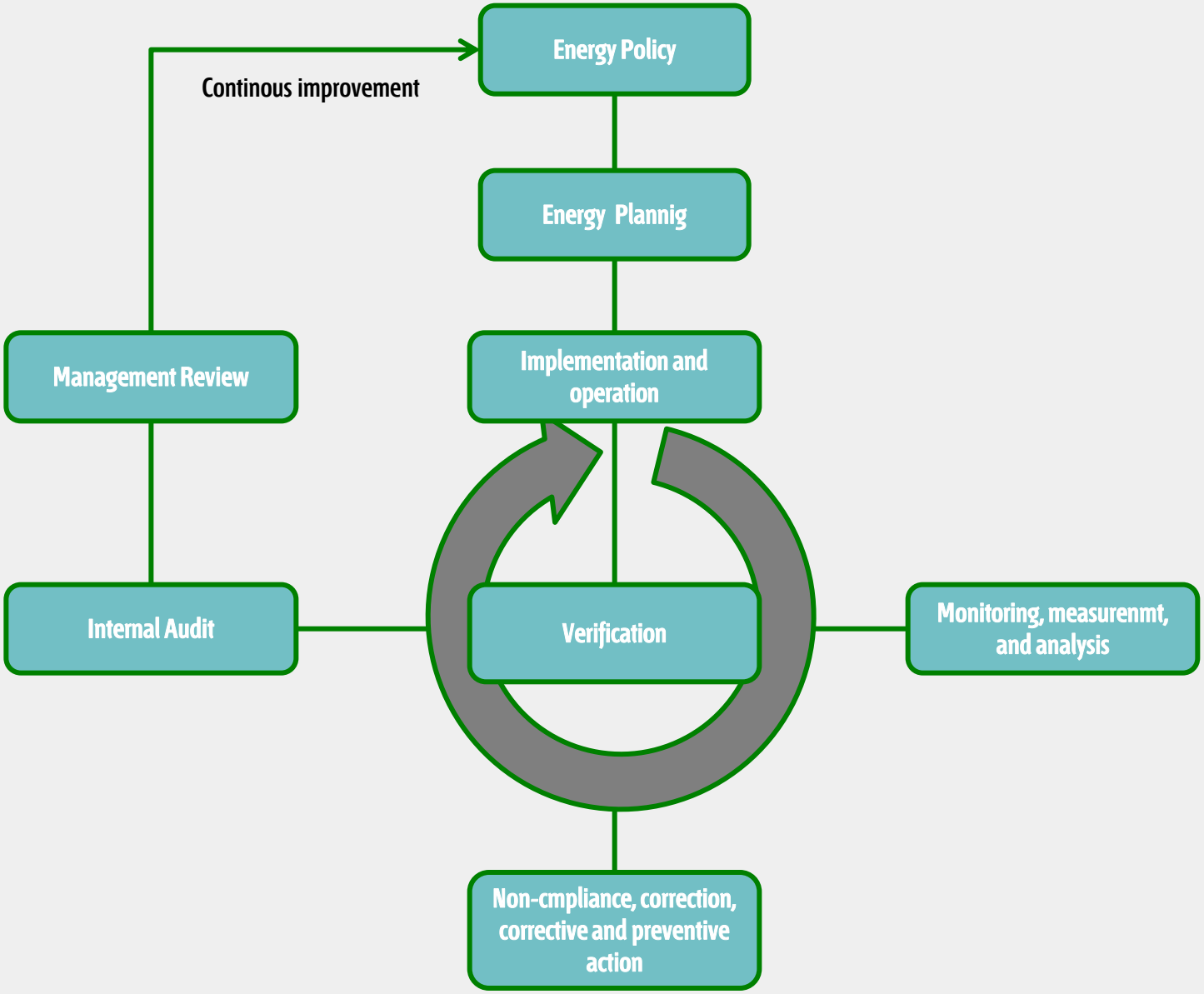


3. Energy management systems

Why implement and certify an EMS?

- Promote energy policy and integrate energy efficiency in the organization, aligning EMS with other management systems available.
- Improving the energy efficiency of systematic processes and improve business results by identifying specific technical solutions.
- Responsible and cost-effective *(cost reduction)*
- Knowing the current mandatory policy objectives and future energy efficiency and reducing greenhouse gases.
- Willingness to comply with the Kyoto Protocol commitments by reducing CO2 emissions.

3. ISO 50001:2011



3. ISO 50001:2011

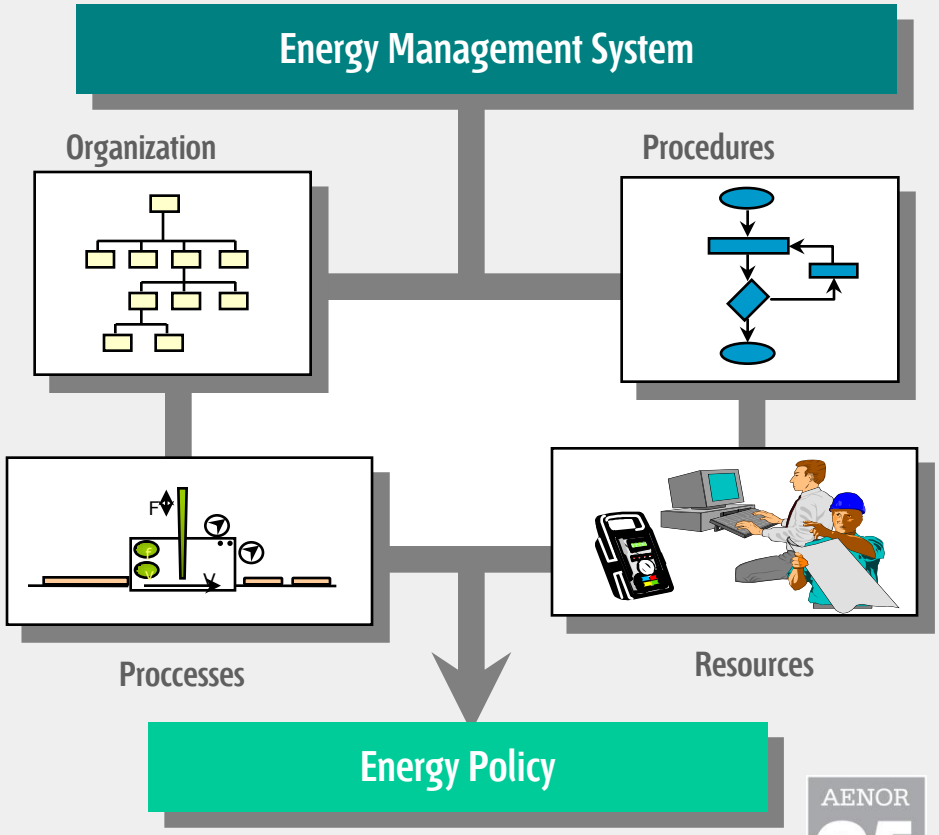
Reflections

- This standard doesn't establish absolute requirements for energy performance beyond the commitments included in the energy policy of compliance with applicable legal requirements and continuous improvement.
- By itself not establish performance criteria with respect to energy. The concepts of scope and limits give the organization flexibility to define what is included in theEMS.
- The concept of energy performance includes the use of energy, energy efficiency and energy consumption. So the organization can choose from a wide range of activities of energy performance. For example, the organization can reduce its peak demand, the excess energy use or energy waste or improve the operations of its systems, processes or equipment.
- Two organizations that perform similar activities but have different energy performance can both meet the requirements.

3. ISO 50001:2011

General Requirements

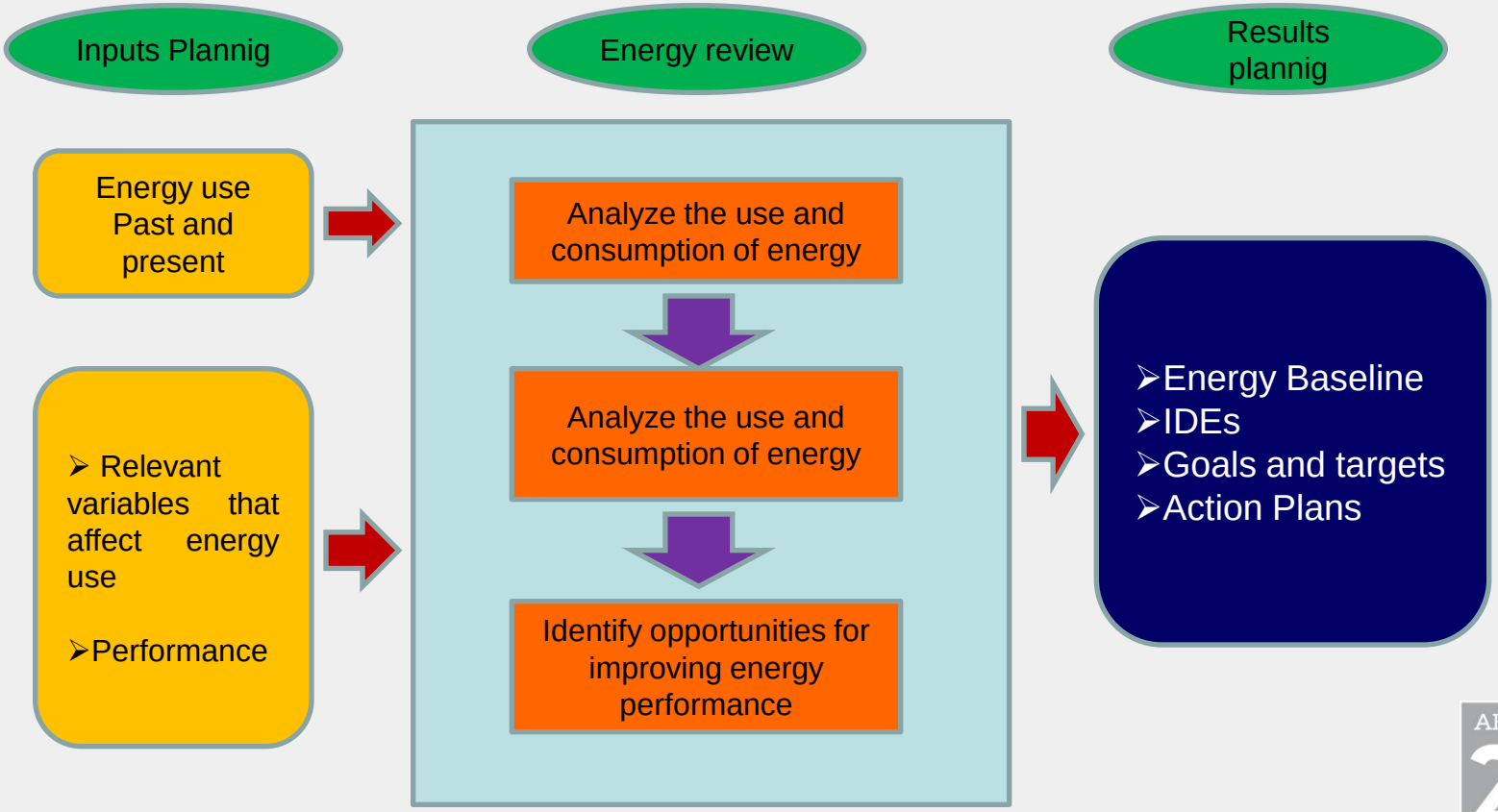
This International Standard aims to improve energy performance.
The organization periodically review and evaluate its energy management system to identify opportunities for improvement and implementation.
The pace of progress, the extent and duration of the continuous improvement process are determined by the organization.



"Define and document the scope of the Energy Management System"

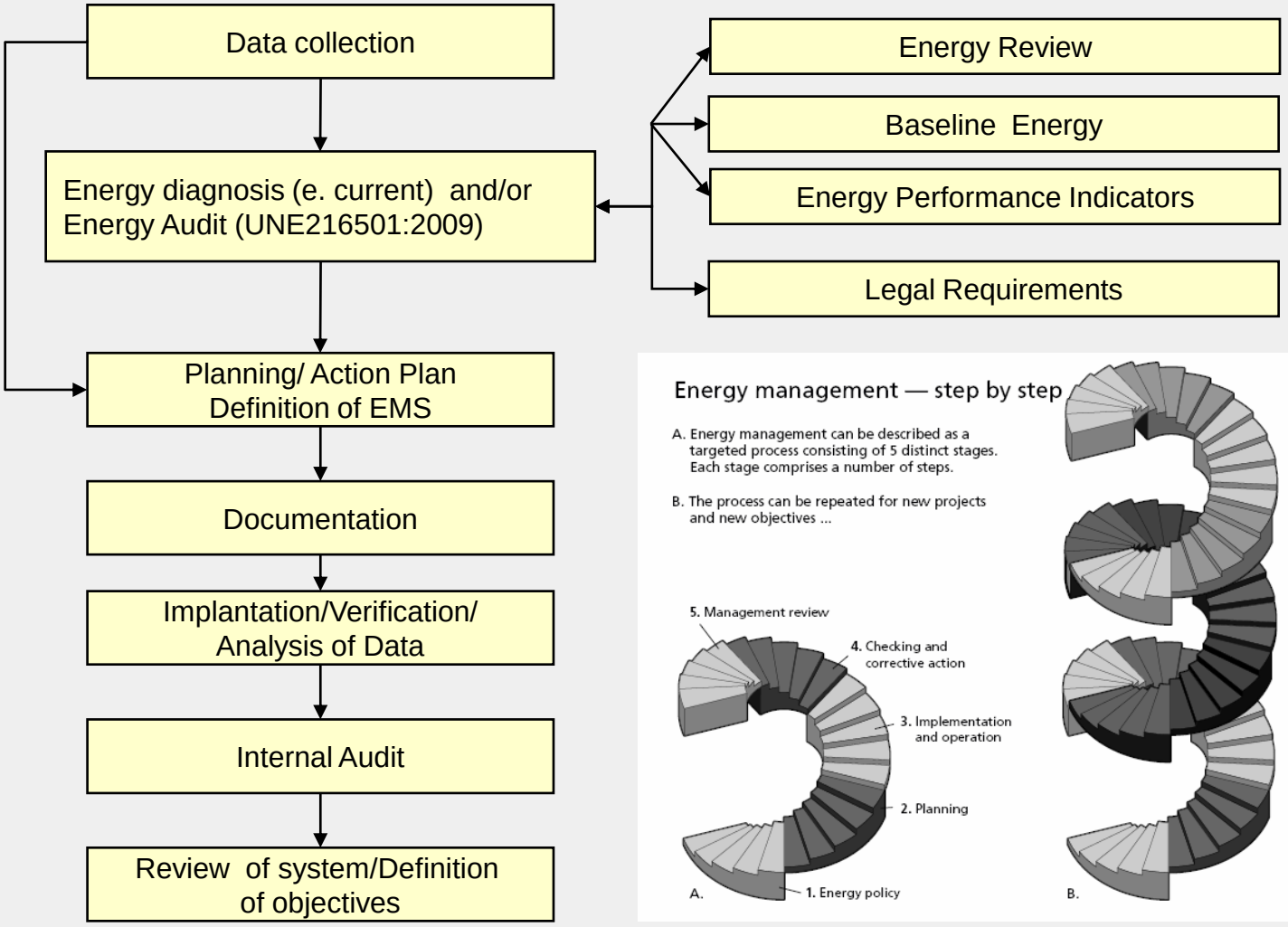
3. ISO 50001:2011

Energy Planning Phases



3. ISO 50001:2011 - Conclusion

IMPLANTACIÓN SGE



Source: Danish DS 2403:2001, Energy Management-Specification.

4. Why Carbon Footprint

Are tools that

- Contribute to reducing CO2 emissions in products and organizations in the context of climate change mitigation.
- Contribute to the creation of a market for products and services with low carbon responds to current social demand.
- They help to identify cost savings opportunities in organizations.
- Contribute to the demonstration to third parties of the organization's commitment to social responsibility through their requirements for mitigation of climate change.

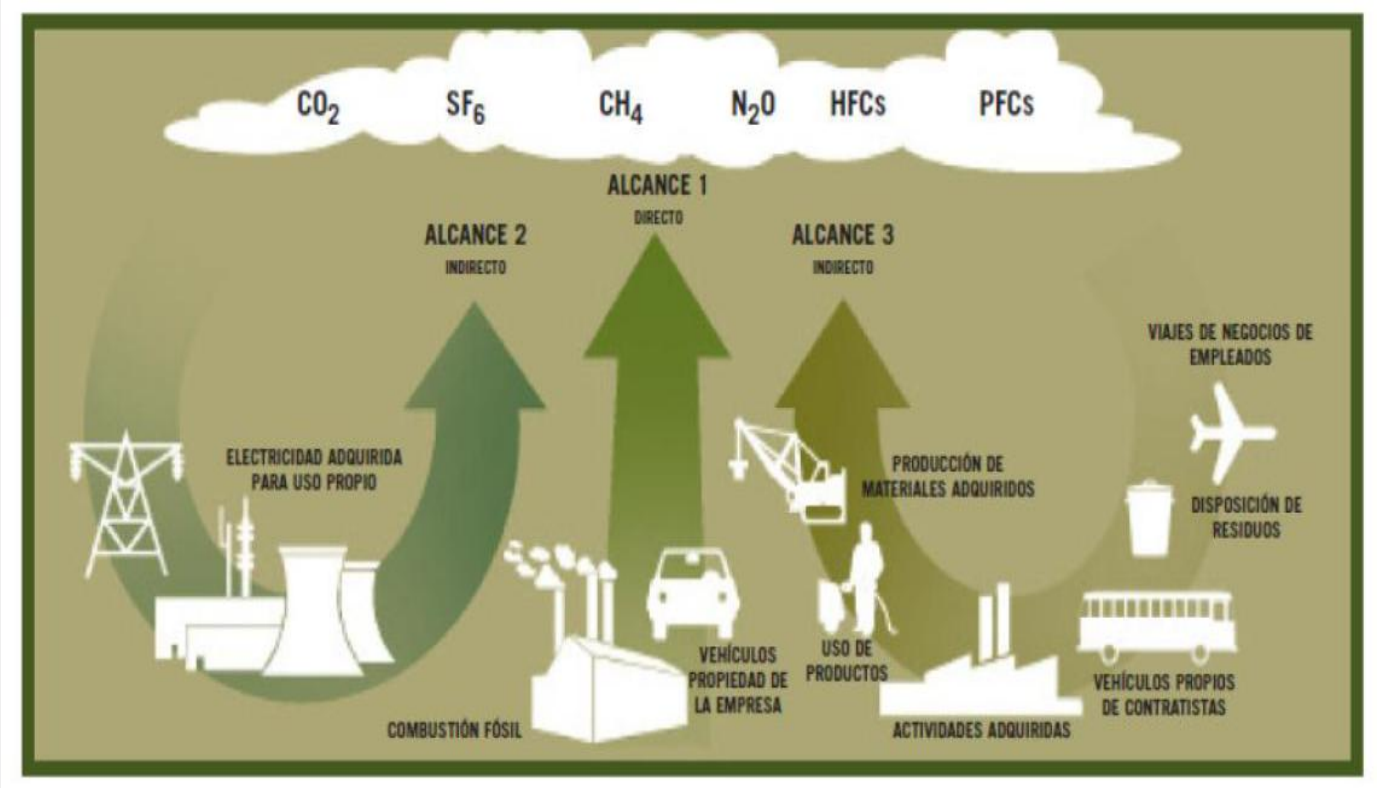
4. Concept of Carbon Footprint

Carbon Footprint

- Is an eco-abel used to describe the quantification of emissions of all greenhouse gases associated to organizations, events or activities or to the life cycle of a product in order to determine their contribution to climate change and expressed in tons of CO2 equivalent .

4. Carbon Footpring –System Limits

For types of sources and gases: Scopes 1, 2 and 3.



Fuente: Ghg Protocol

4. Standards and Specifications

Quantification of the Carbon Footprint (I)

There are various standards and specifications for the quantification of the carbon footprint:

- PAS 2050 (BSI / DEFRA / Carbon Trust, UK). Based on the methodology of Life Cycle Assessment (ISO 14004 and 14044 standard: 2006) and eco-labeling standard (ISO 14021)

- PAS 2060 (BSI). Specifications for the demonstration of carbon neutrality in organizations

- "GHG Protocol" (a Corporate Accounting and Reporting Standard). International protocol developed by the WRI / WBCSD, to calculate emissions of greenhouse gases in the later were the basis of ISO 14064

4. Standards and Specifications

Quantification of the Carbon Footprint *(II)*

- ISO 14064-1 Greenhouse gases -- Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals.

- ISO 14067 parts 1 and 2. Carbon Footprint of products *(*in preparation*):* Quantification and reporting. *(*Expected publication in 2011*)* .- This standard will follow the guidelines set by the draft standard "Product Life Cycle Accounting and Reporting Standard" developed by GHG Protocol

4. Standards and Specifications

Quantification of LCAs for the Carbon Footprint of products

ISO 14040 and 14044 Standards .- Life Cycle Analysis: environmental management tools based on the collection and evaluation, according to a systematic set of procedures for the inputs and outputs of raw materials, energy and emissions during the life cycle of a product or service

4. Standards and Specifications

Reporting of Carbon Footprint

There are various standards for the communication of the Carbon Footprint:

-ISO 14020 Environmental labels and declarations -- General principles.
- ISO 14024 Environmental labels and declarations -- Type I environmental labelling -- Principles and procedures.
- ISO 14025 Environmental labels and declarations -- Type III environmental declarations -- Principles and procedures .
- ISO 14069 Quantification and reporting of GHG emissions for organizations *(scheduled its publication in 2011-2012)*

4. Carbon Footprint of product

PHASES OF A PROJECT OF CARBON FOOTPRINT OF PRODUCT

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Thanks for your attention

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