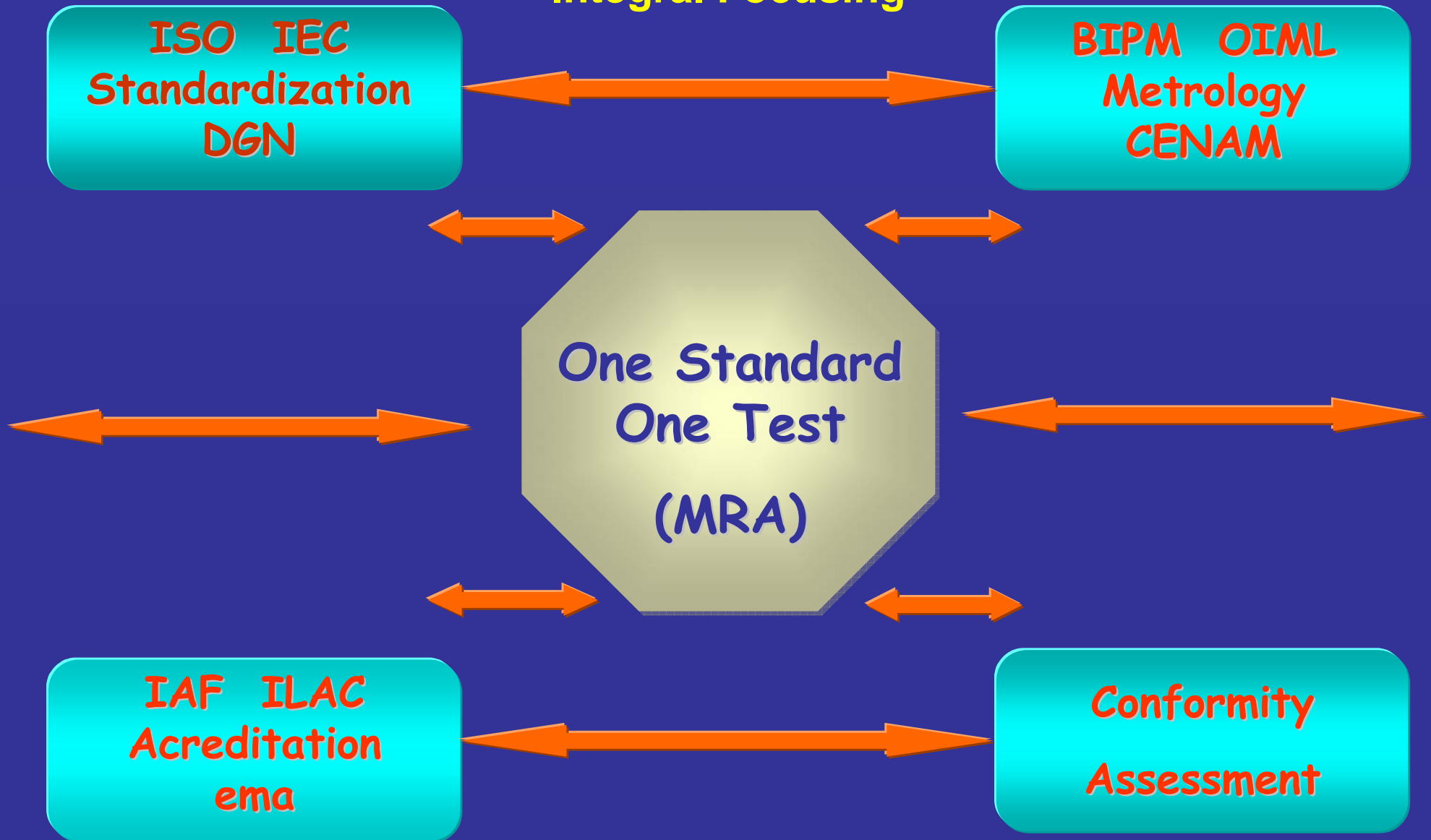




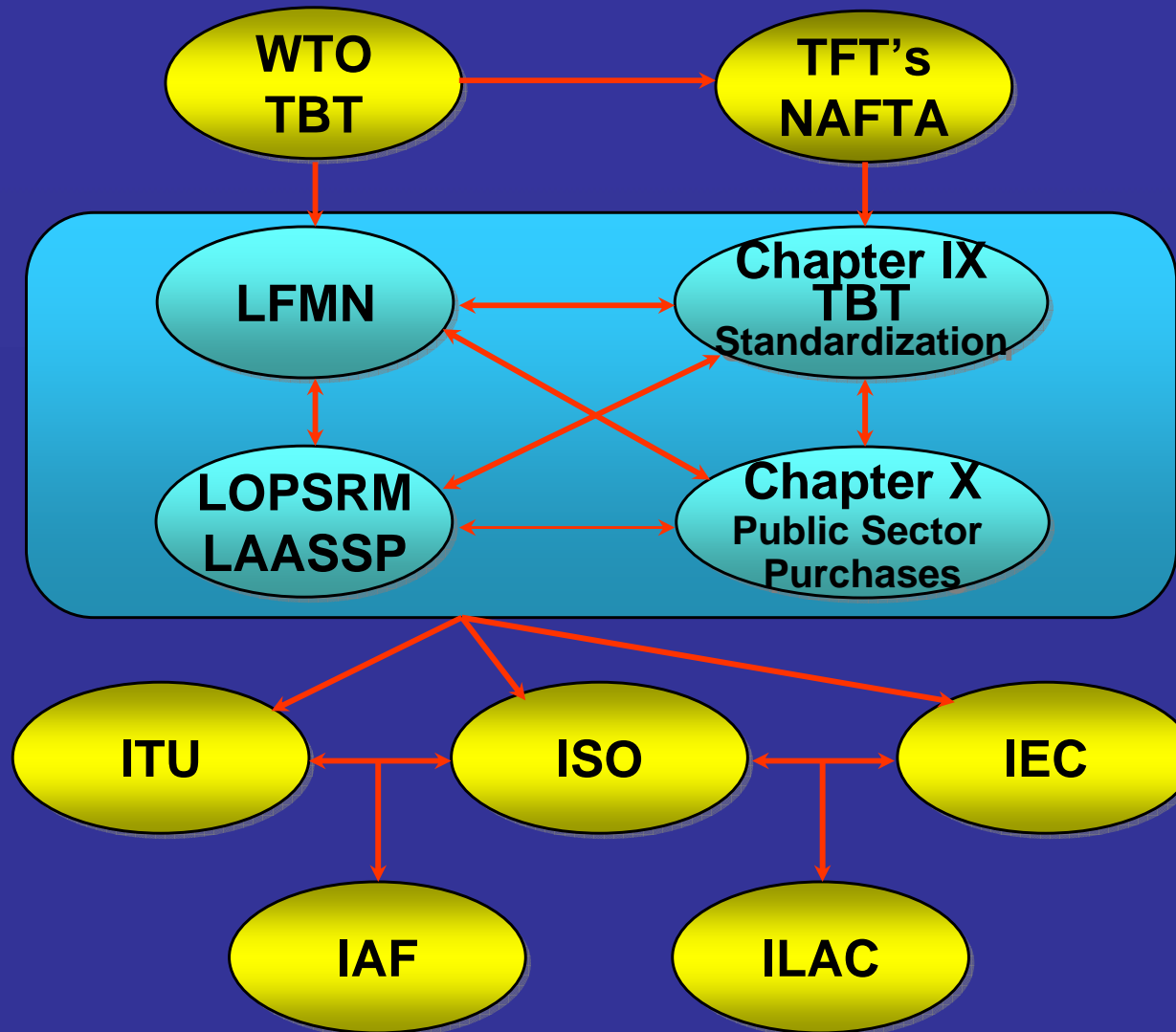
***Reference Standards in PEMEX and their
Harmonization with International Standards***

*International Standards Workshop
For The Global Oil and Gas Industry
Focusing on Mexico*

Integral Focusing



International Regulatory Framework



Regulatory Framework

**Management of Federal Resources in the Acquisition
Renting and Contracting of Goods, Services and
Public Work**

Technical basis of the Public Biddings

Standardization and Conformity Assessment

Political Constitution of the Mexican United States

Article 133

This Constitution, the Laws of the Congress and all the Treaties shall be the Supreme Law of the Nation.

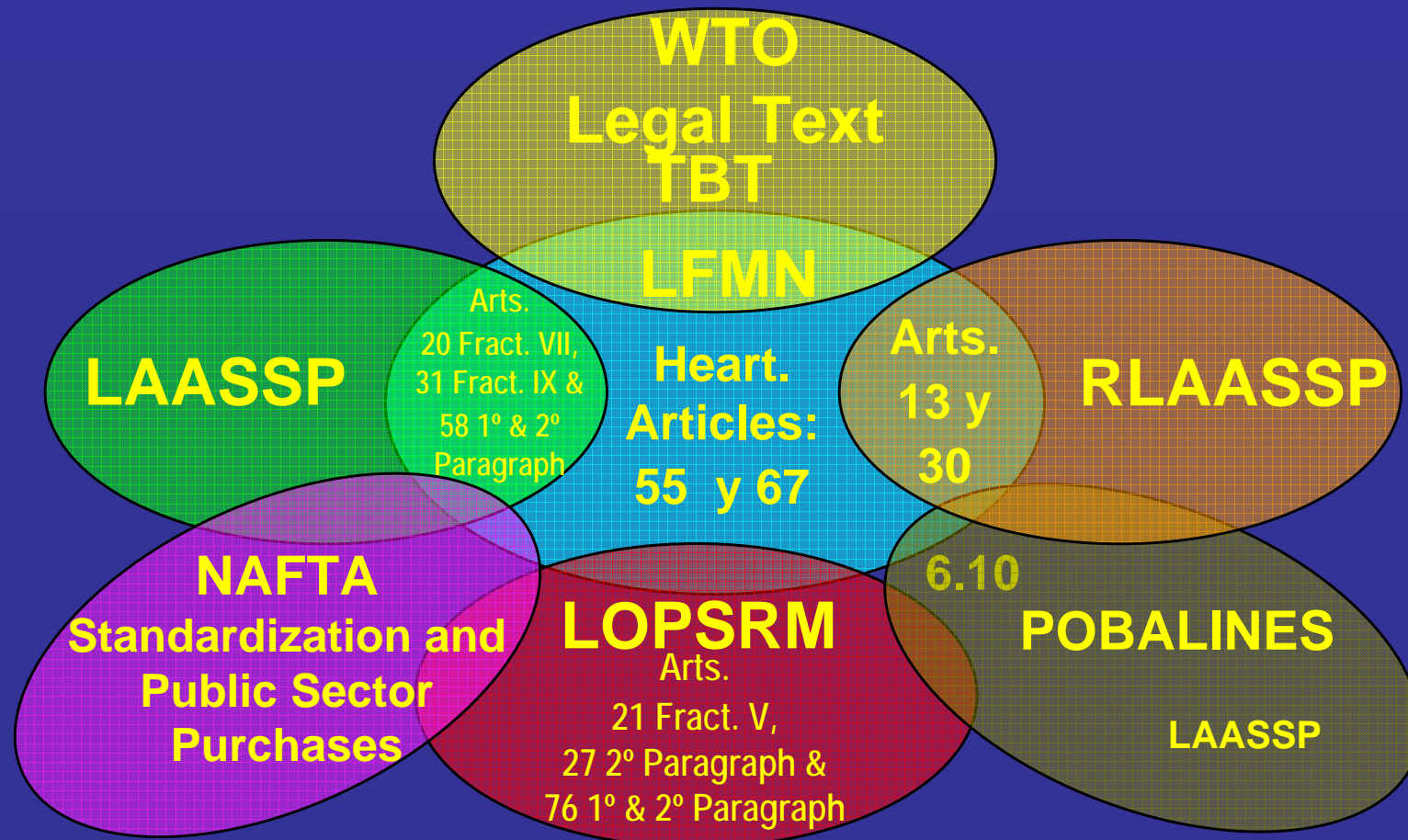


Article 134

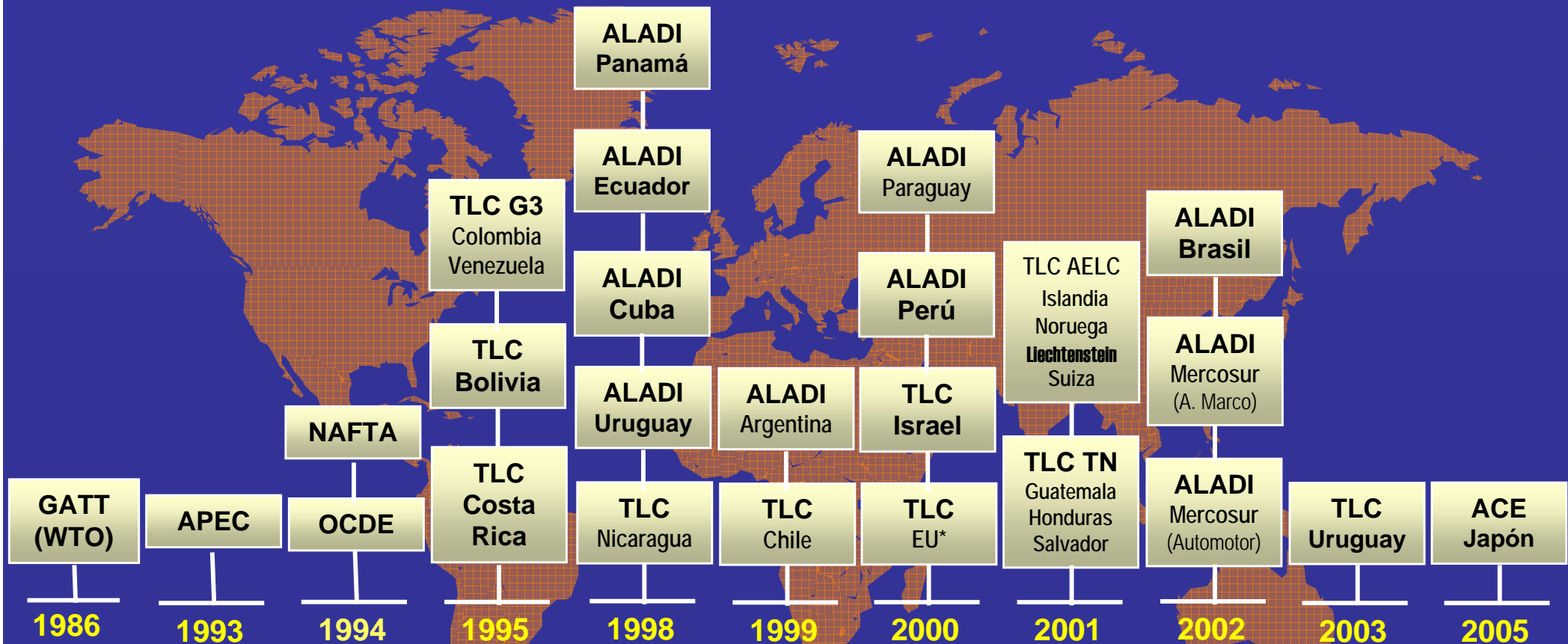
The acquisitions, renting and alienations of all kind of goods, services... and the award of contracts of public services, ... shall be by public biddings.



**Linking:
Standardization - Goods and Services - Public Work
Technical Basis of Public Biddings**

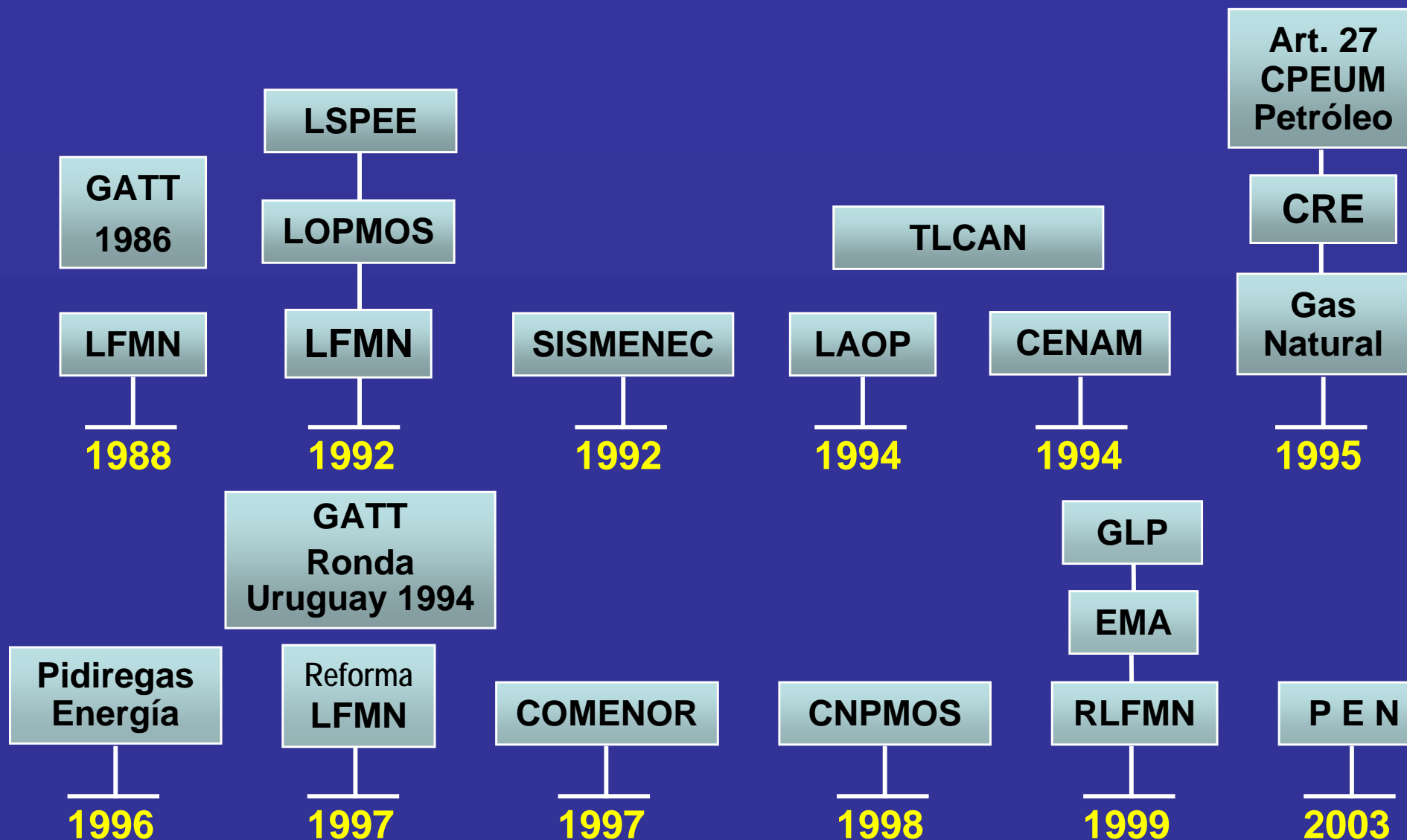


Integration of Mexico to the World Trade



*EU: Germany, Austria, Belgium, Denmark, Spain, Finland, France, Greece, Ireland, Italy, Luxemburg, the Netherlands, Portugal, United Kingdom and Sweden.

World Trade y the National Regulatory Framework



INTERNATIONAL TREATIES

NAFTA (TBT)

Chapter IX. Standardization

Article 903. TBT

Article 905. Adoption of International Standards

Article 908. Conformity Assessment

Chapter X. Public Sector Purchases

Article 1007. Technical specifications

INTERNATIONAL TREATIES OF TRADE FREE Europe Union

**Article 18. Technical Regulations and
Conformity Assessment.**

International Regulatory Framework

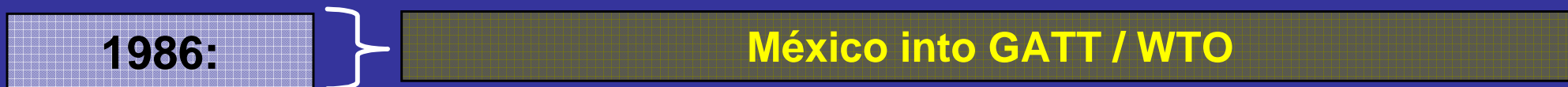
WTO / TBT; IMO / SOLAS; OIML

International Standards

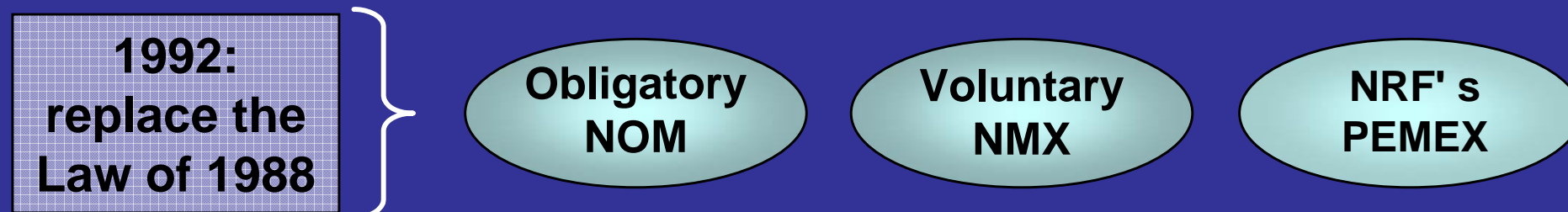
Recognize



LFMN - Federal Law on Metrology and Standardization. Its evolution by Effects of TBT / WTO:



Mexican National Standards



It adds



NMX-Z-013/1-1977

7. Agreement with international standards

- 7.1 When the agreement is total is shall be indicate: “***This standard totally agrees with the International standard***”.
- 7.2 When the agreement is partial shall be indicate: “***This standard basically agrees with the International standard...*** and differs in the following points...”, succinct is due to indicate clearly and in form the technical points of discrepancy and foundations that motivate such discrepancies.
- 7.3 When agreement with any international standard does not exist, it must be indicated: “***This standard does not agree with any International Standard***”, indicating itself in addition because this agreement does not exist

Federal Law on Metrology and Standardization (LFMN)

Mexican Official Standards

Article 41. – The Mexican Official Standards should contain:

VI Degree of agreement with guideline and standard internationals.

.....” The Mexican Official Standards were taken in consideration the mexican and international standards...”

Federal Law on Metrology and Standardization (LFMN)

Mexican Standards

Article 51-A. - II. To take as it bases the international standards, unless the same ones are ineffective or inadequate.

Reference Standards

Article the 67.- The entities of the Public Federal Administration, shall have to constitute standardization committees for the elaboration of reference standards according to which they acquire, rent or contract goods and services, when the Mexican or international standards do not cover the requirements for such entities, or else the specifications contained in those standards are considered inapplicable or obsolete

Regulation of the Federal Law on Metrology and Standardization (RLFMN)

Mexican Official Standards

Article 28. IV.- They will have to indicate to the degree of agreement with international and national standards, for which it will be mentioned if this one is identical, equivalent or not equivalent.

Article 30. When elaborating the first draft of Mexican Official Standards, the dependencies will be able to choose by:

III To adopt the respective international standard, according to the established in fraction IV of article 28 of this Regulation .

Article 40. In the revision of the Mexican Official Standards, it will be taken in consideration, among other things that:

I A standard or international lineament has been approved the product or service to regulate, that did not exist when the standard was published;

Section II

Of the Mexican Committees for the participation and attention of international organisms

Articles: since 63 until 67

Example of Agreement in Announcement of Public Consultation

PROY-NRF-051-PEMEX-2006 Systems of air conditioning

Objective

To establish the technical and documentary requirements for contract the services of engineering for the design and specification of the materials required in systems of air conditioning.

Scope

Establish the requirements and criteria to design the systems of air conditioning for cooling or heating it specifies equipment and materials that conform them.

Agreement with Mexican or international standard

It has partial agreement with the International Standard ISO 15138:2000.

Example of Harmony in Statement in Force

NRF-162-PEMEX-2006 Concentric orifice plates

Objective

To establish the specifications that must fulfill the plates of concentric orifice.

Scope

It establish the requirements for the acquisition of the plates of concentric orifice as far as the conditions of design, materials, manufacture, inspection, its storage and transports.

Harmony with Mexican or international standard

This Standard agrees partly with international standard ISO 5167-1: 2003 and ISO 5167-2: 2003.

Example of non Harmony in Statement in Force

NRF-049-PEMEX-2006 Inspection of goods and services

Objective

To establish the technical and documentary requirements that must fulfill the companies of services in the inspection of the quality of goods and services acquired by PEMEX.

Scope

It establishes the technical and administrative requirements to make the services of inspection of goods and services included in the article 3o. of the Law of Acquisitions, renting and services of the Public Sector that must fulfill the companies contracted by PEMEX.

Harmony with Mexican or international standards

This Reference Standard does not have agreement with other standards.

Agreements With International Standards

Reference Standards	% 2000	% 2001 / 2005
Totally	0	0
Partially	10	35
No Agree	90	65

Cancellation of Reference Standard by the use of International Standards ISO/IEC

- ◆ NRF-118-PEMEX-2006 “Fire portable equipment: Extinguishers ”
 - ✓ ISO-5923 “Fire Protection”
 - ✓ ISO-7165 “Fire Fighting”
 - ✓ ISO-11601 “Wheeled Fire Extinguishers”
 - ✓ ISO-11602/1 “Fire Protection”
 - ✓ ISO-11602/2 “Fire Protection”

NRF-001-PEMEX-2006 and its agreement with the ISO-3183

- ◆ NRF-001-PEMEX-2006, “Steel pipe for the hydrocarbons recollection and transportation”.

8.2 Pipeline for sour hydrocarbons

For this service are adopted the requirements established in ISO 3183 - 3 for L360 degrees until L450 (X-52 until X-65), with the additions and modifications that are indicated in 8.2.1 to 8.2.6 of this standard

8.3 Pipeline for non sour hydrocarbons

For this service are adopted the requirements established in ISO 3183-2 in L290 degrees until L485 (X-42 until X-70), with the additions and modifications that are indicated in 8.3.1 to 8.3.6 of this standard.

10. AGREEMENT WITH NATIONAL OR INTERNATIONAL STANDARDS

This standard agrees partially with ISO 3183-2: 1996 and ISO 3183-3: 1999

Application degree of international standards in the process of standardization of PEMEX Exploration and Production

Example: Standardization Manual: “Fixed Offshore Platforms of Perforation ”

Scope: Design, selection of materials, construction, installation, transportation and tests.

* Standardization	2000 %	2005 %
International Standards ISO/IEC	10	33
Mexican National Standards	25	33
Others	65	33

* **Note:** In the 2000, 40 international standards were used. In The 2005 were used over 120 international standards.

Technical Specifications

✓ ISO/IEC/PAS

Another tool used by the ISO and IEC to satisfy the demands of the market in the technological areas that are experiencing an accelerated evolution is the ISO/IEC-PAS, that is, the accessible specifications to publish that come in the own structure of the Technical Committees from ISO/IEC and whose objective is to make agile the standardization.

✓ PEMEX and the Technical Specifications

PEMEX develops and applies its technical specifications on the basis of article 67 of the Federal Law on Metrology and Standardization .

WTO

Agreement on Technical Barriers to Trade

Substantives dispositions

F.- When international standards exist that is imminent his formulation definitive, institution with activities of normalization will use those standards, or his elements pertinent, as it basis of the standards that elaborate except for in case those international standards or those elements they are not effective or appropriate, for example, to offer an insufficient level of protection or by climatic factors or other fundamental geographic factors, or by fundamental technological problems.

API Guide for Adoption of International Standards ISO / IEC as US National Standards
Edition: March 2006



**American
Petroleum
Institute**

ANSI



**ANSI Procedures for the National Adoption of ISO and IEC Standards as
American National Standards.**

Edition: January 2003

NRF / PEMEX

DGN

ISO

**¿DGN can use the ANSI procedures for the adoption of ISO/IEC, like a standard
NRF/DGN (Mexican National Standards)?**

API Guide for Adoption of ISO Standards as US National Standards

✓ Introduction

The committees and the personnel of API when they are prepared to adopt a standard ISO like a standard API/ANSI, are based on the information contained in Guide ISO 21, “Adoption of International standards like regional or national standards”, 2a. edition 1999, and in “Procedures ANSI for the adoption of standards ISO/IEC like American National Standards”.

ISO / IEC: Directives and Guides

- **ISO / IEC: Directives 1; 2004: Procedures for the technical work**
- **ISO / IEC: Directives 2; 2004: Rules for the structure and drafting of international standards**
- **ISO / IEC Guide 21: 2005**

Consists of following parts, under the general title ***Regional or national adoption of international Standards and other International Deliverables:***

Part 1: Adoption of International Standards.

Part 2: Adoption of International Deliverables other than International Standards.

◆ Degrees of Correspondence:

- 1) Identical
- 2) Modified
- 3) Not equivalent

- ◆ Methods of adoption:
 - ▶ Endorsement methods
 - ▶ Republication
 - ▶ Choice among adoption methods
- ◆ Methods of indicating technical deviations and editorial changes.
- ◆ Methods of numbering of regional or national standards that are identical adoptions o International Standards.
- ◆ Methods of indicating the degree of correspondence

ISO/IEC Guide 21-1 Regional or National Adoption of International Standards and other International Deliverables

Part 1.- Adoption of International Standards

➤ **A.1 Identical (IDT)**

The regional or national standard is identical to the ISO or IEC standard under the following conditions:

- a) the regional or national standard is identical in technical content, structure and wording (or is an identical translation), or
- b) the regional or national standard is identical in technical content, although it may contain minimal editorial changes.

➤ **A.2 Modified (MOD)**

The regional or national standard is modified in relation to the ISO or IEC standard under the following conditions. Technical deviations are permitted provided they are clearly identified and explained. The regional or national standard reflects the structure of the ISO or IEC Standard. Changes to the structure are only permitted if an easy comparison of the content and structure of the two standards continues to be possible

ISO/IEC Guide 21-1 Regional or National Adoption of International Standards and other International Deliverables

➤ **A.3 Not Equivalent (NEQ)**

The regional or national standard is not equivalent to the ISO or IEC Standard in technical content and structure and the changes have not been clearly identified. This also can include the case where only a minority in number or significance of the ISO or IEC provisions remains in the regional or national standard.

This degree of correspondence does not constitute an adoption

Annexes

A. Examples of list of technical deviations:

- Deletions
- Additions
- Alterations

B. Relationship between the degree correspondence and the methods of adoption

C. Adoption notices

- c.1 Example of an endorsement notice
- c.2 Example of adoption notices of republications

Reprint

Translation

Redraft

Annexes

D. Introductory material

- ▶ National foreword for an identical national standard.
- ▶ National foreword for an adopted national with modifications
- ▶ National foreword for an identical translation.
- ▶ National foreword for translation with modifications.

E. Methods for dating identical standards

- ▶ Single-line numbering.

Using the date of the international standard: XYZ ISO 1234: 1995

Using the date of the adopting standard: XYZ ISO 1234: 1997

- ▶ Two-line dual numbering: XYZ 2345: 1997/ ISO 9876: 1994 or

☞ XYZ 2345: 1997

☞ ISO 9876: 1994

ISO / IEC Guide 21-2: 2005

0. Introduction

0.2 The identification of the degree of correspondence and the adoption methods described in ISO / IEC Guide 21-1 apply to International Standards as well as to other deliverables published by ISO and IEC. However, International Standards are only to be adopted as regional or national standards, that is as deliverables of the same type. *International Deliverables other than International Standards should preferably be adopted as regional or national deliverables of the same or a similar type.* However it is also possible to adopt these deliverables as deliverables of another type (e.g. an ISO or IEC Technical Specification may be adopted as a national Technical Specification, but it could also be adopted as a national standard or another deliverables).

➤ **Conclusions**

- ❑ Foment the active participation of PEMEX in ISO/TC-67
- ❑ Define the procedures and guides for the adoption of international standards ISO/IEC as Mexican national standards (NOM' s, NMX' s and NRF' s) .
- ❑ For the adoption of International Standards ISO/IEC, define the following terms :
 - ✓ Agreement
 - ✓ Harmonization
 - ✓ Adoption
 - ✓ Correspondence
 - ✓ Application
 - ✓ Equivalent

- ❑ To specify the scope of the Agreement on Technical Barriers to Trade, in relation with the International, Regional and National Standardization.
- ❑ Define the role of the International Organizations as IMO and the OIML in the development of the international Standardization.
- ❑ Define if the Conformity Assessment is obligatory in the application of International Standards
- ❑ Formulate and implement the Strategic Plan of Standardization of the Mexican Petroleum Industry.
- ❑ To strengthen the links with the Regional Organizations of Standardization as COPANT and CEN.
- ❑ To establish agreements with National Organizations of Standardization as ANSI, BSI, AENOR and ABNT.

- ❑ For the character of state-owned company PEMEX is obligatory the application of Technical Standards (ISO/IEC, NOM's, NMX's and NRF's).
- ❑ Given the benefits of the work in equipment and the transference of technology, to foment the PEMEX participation in ISO's Committees.
- ❑ To propose that PEMEX should join to the groups of work of the ' International Association of Oil and Natural Gas Producers (OGP).
- ❑ Recognize that International Standards play a vital role as the technical foundation for the global market.
- ❑ Agreement on Technical Barriers to Trade (TBT) requires that, wherever possible to it adopt international Standards as the basis for national standards.

Petróleos Mexicanos

<http://www.pemex.com>

Pemex Exploración y Producción

<http://www.pep.pemex.com>

Subdirección de Operaciones y Comercialización

(<http://soc.dpep.pep.pemex.com/>)

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