

**Jordan Standards & metrology Organization  
JSMO**

**JSMO is A governmental institution that is nationally recognized by law to be the central authority to supervise and monitor all activities relating to legal metrology in Jordan .**

**It was established as a public organization according to the Standards and Metrology Law (1994 and 2000).**

## **The principle objectives are:**

- \* Adopt a national system for standardization and metrology based on accepted international practices**
- Keep pace with scientific and technical developments in the fields of standards, metrology, conformity assessment and laboratory accreditation**
- Ensure the health and safety of the consumers and protection of the environment by making sure that goods, products and services comply with technical regulations**
- \* Ensure the quality of local goods, products and services through the adoption of appropriate Jordanian standards to enhance their competitiveness in local and international markets to support the national economy**

## **RESPONSIBILITIES OF JSMO :**

- **Issuing, approving, reviewing, amending and monitoring the implementation of standards and technical regulations with regard to all goods, products and services (with the exception of pharmaceutical products, medicines, veterinary medicines, serums & vaccines)**
- **Establishing a national system of measurement and supervising its implementation**
- **Calibrating, controlling and supervising measuring instruments and practices**
- **Controlling the quality of precious metals and jewellery (testing and stamping)**
- **Granting conformity certificates, including the Quality Mark**
- **Accrediting testing and calibration laboratories and certification bodies in accordance with approved international practices**

## **JSMO Board Of Directors**

- 1- Director General Of JSMO / Vice chairman .**
- 2- Ministry of trade and industry.**
- 3- Food and drug administration .**
- 4- Ministry public works and housing .**
- 5-Ministry of energy and mineral resources .**
- 6- Ministry of water and irrigation .**
- 7-Ministry of agriculture .**
- 8- Organization for environmental protection .**
- 9- Customs department .**
- 10- Royal scientific society .**
- 11- Chamber of Industry .**

**12- Chamber of Commerce.**

**13-National society for consumer protection .**

**14- Jordan society for quality .**

## AIMS Of JSMO - 1/2

- To keep up with the latest developments in international practices concerning standardization, metrology and conformity assessment procedures.
- To cooperate with international and regional standardization bodies to harmonize Jordanian Standards with international, regional and Arab standards.
- To develop Jordanian Standards that meet the needs of users, and to ensure that they are practical for use.

## AIMS OF JSMO - 2/2

- **To support the national economy by promoting the use of Standards in industrial activities, thus enhancing product quality and reliability.**
- **To protect the health and safety of consumers and the environment through the conformity of goods and services to technical regulations.**
- **To provide users with information on currently valid standards, technical regulations, guides and conformity assessment procedures.**



## **Part of Regulation # 3/2012**

**Title : Instruction for Organizing Legal Metrology In Jordan  
Issued In Accordance With JSMO Law # 22 / 2000**

**Despite The Limited Resources JSMO Is Committed To Establish  
National Metrology Policy That Is In Accordance With  
International Requirements**

**Main Goal : Support The National Economy Through A unified  
Measurements That Are Internationally Recognized So As To  
Facilitate Trade Between Jordan And Other Countries And  
Protect The Welfare And Health of Citizens And The  
Environment .**

# **One Law Governing The Activities Of JSMO .**

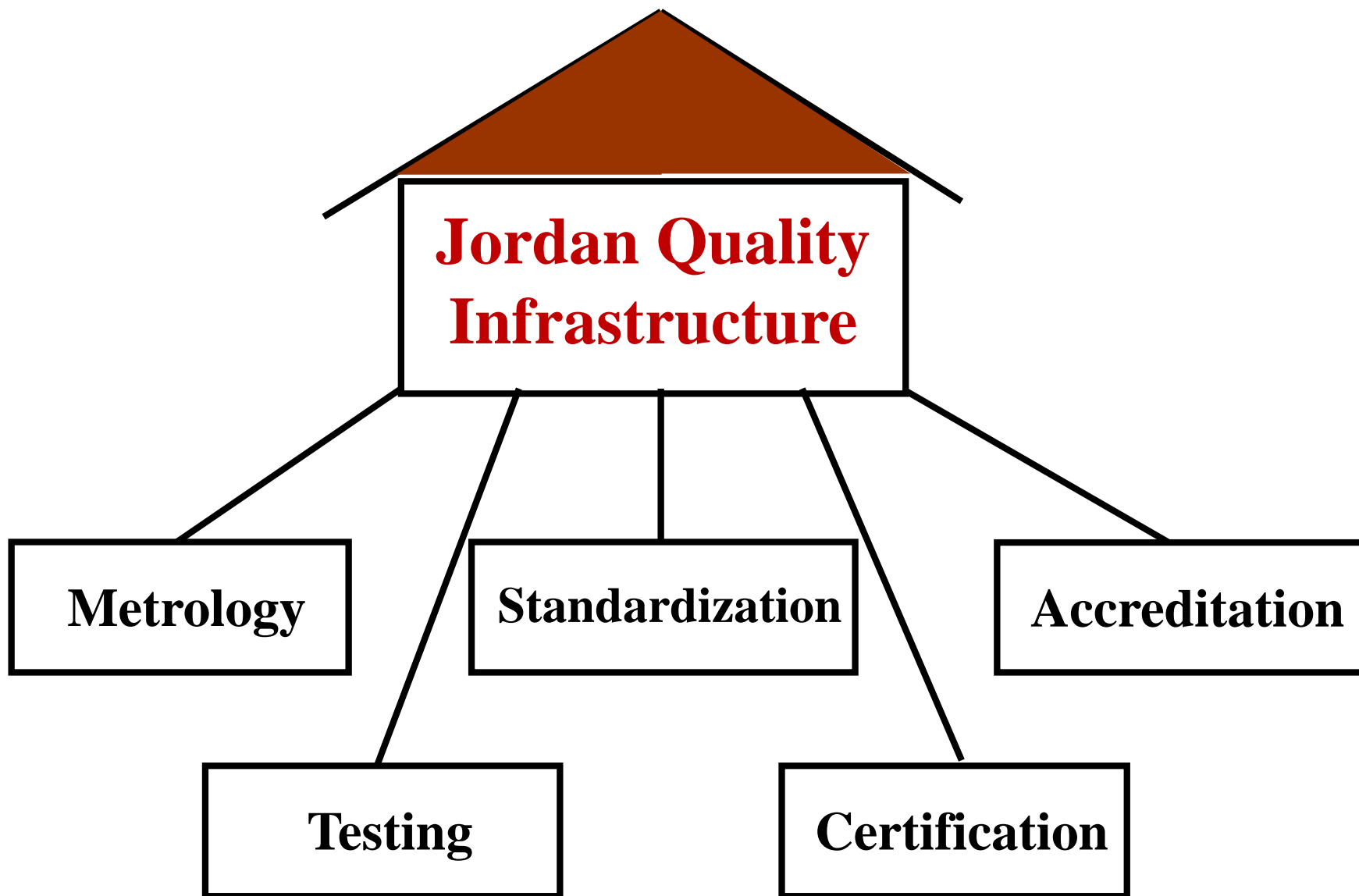
**“ Standards & Metrology law # 22/2000 + amendment 2015 .**

## **List of Regulations for legal metrology :**

- 1- Reg. # 1/2010 :  
Mandatory Requirements For Medical &  
Measuring Instruments .**
- 2- Reg.# 2/2010 :  
Mandatory requirements for legal measuring instruments .**
- 3- Reg. #3 /2012 :  
Organizing metrology activities .**
- 4- Reg.# 4 /2008 + ammend.1+2/2009 :  
Pre-Packaged Containers**
- 5- Reg.#5 /2007 :  
Metrological Terms And Definitions .**
- 6-Reg. # 6 /2007 :  
Legal Metrology Units .**
- 7- Reg. # 7 /2007: Metrology Fees + Amend. 2014  
Showing The Measuring Instruments Covered .**

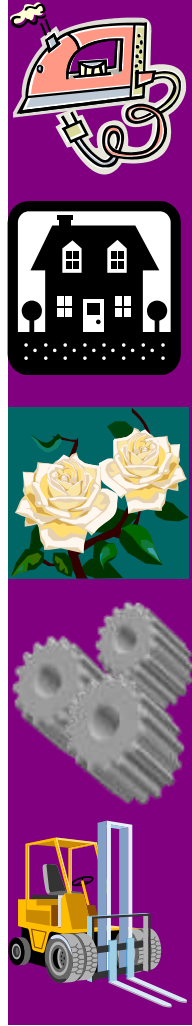
## **STATUS OF JSMO INTERNATIONALLY**

- 1 – Associated Member To OIML**
- 2 - Full member in Euro Mediterranean Legal Metrology Forum (EMLMF) since 2006.**
- 3 - Associated member to the Asia Pacific Metrology Program (APMP) since 2006.**
- 4 – JNMI is an Associated Member to the General Conference on Weights and Measures (CGPM)**

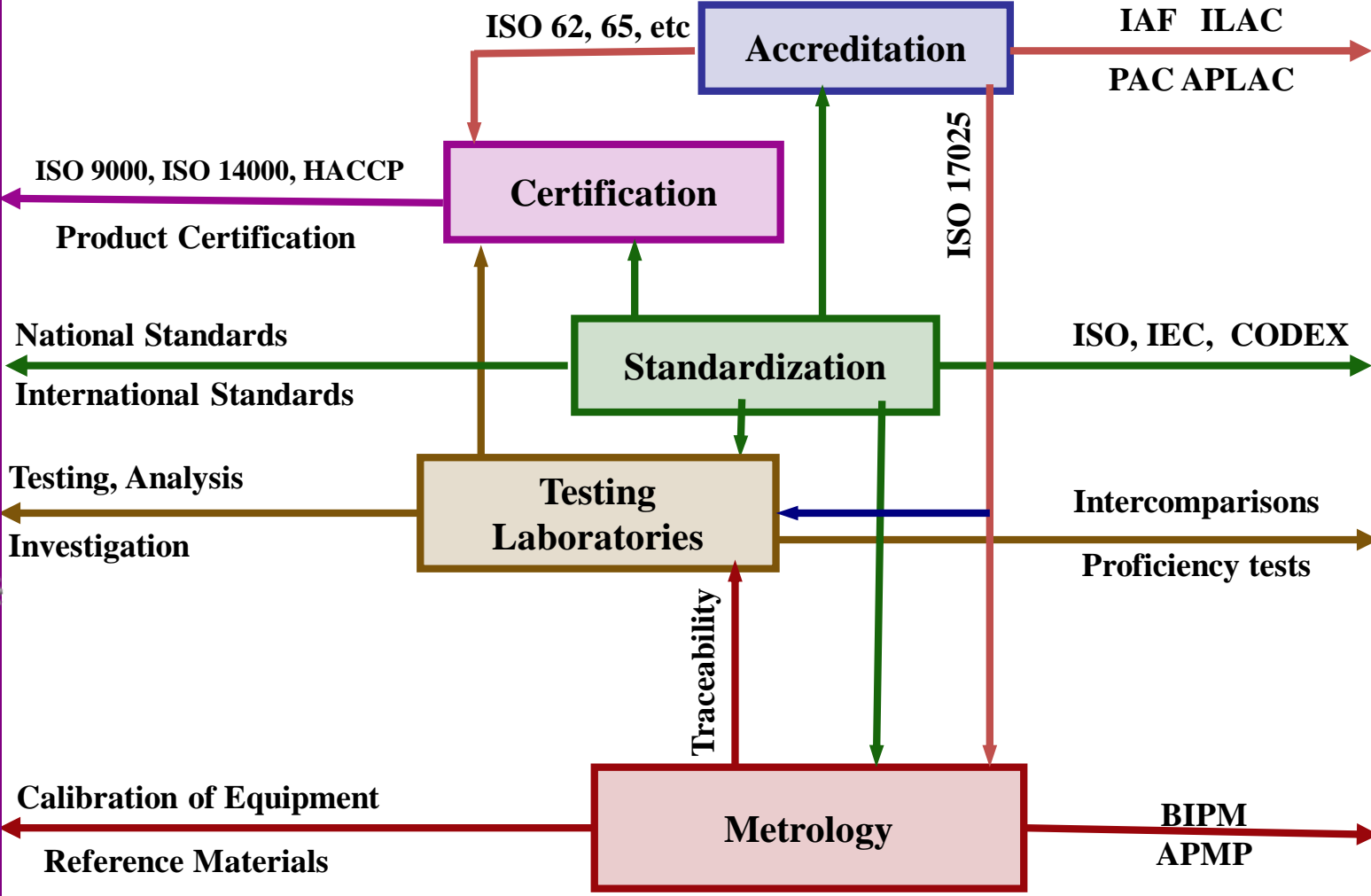


# Quality Infrastructure

## National Products



## International Requirements



# JSMO organizational structure

## JSMO Board of Directors

Chairman (Minister of Industry & Trade), Deputy (General Director of JSMO)

13 members (representing the public & private sectors)

## General Director

**Metrology Department**

**Control of JSMO performance Department**

**Standardization Department**

**Knowledge Management Department**

**Control Department**

**Administration & Finance Department**

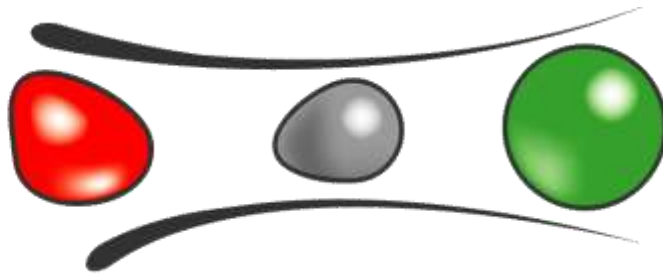
**Certification Department**

**Human Resources Department**

**Precious Metal Department**

**Planning and Cooperation Department**

**Testing Department**



مؤسسة المواصفات والمقاييس

Jordan Standards & metrology Organization

# Jordan Metrology System (JMS)

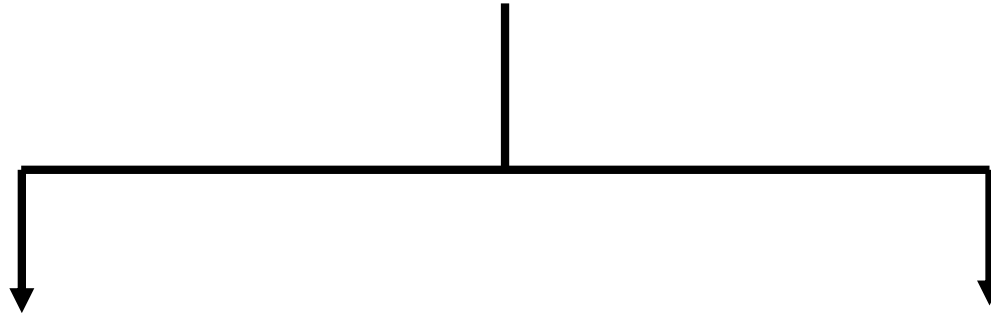


# What is JMS ?

**JMS is the technical and organizational infrastructure which ensures a consistent and internationally recognized basis for measurement in Jordan.**



# Objectives of JMS



**Enabling individuals and organizations in Jordan to make measurements competently and accurately and to demonstrate the validity of such measurements.**

**Coordinating the Jordan's measurement system with the measurement systems of other countries.**

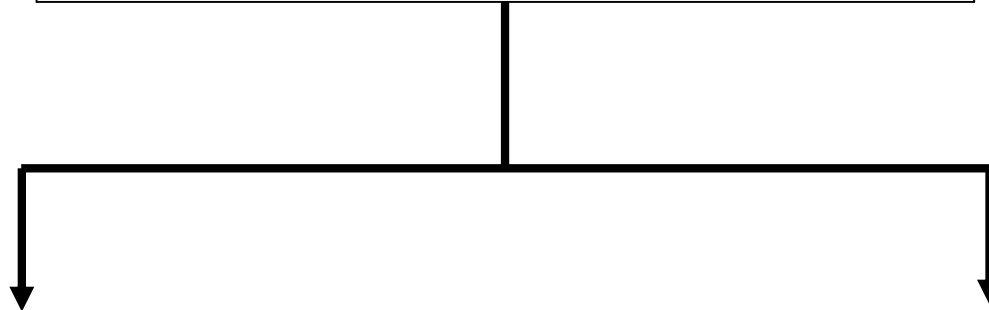
## Activities of JMS

- 1- Maintaining the national standards, which may be artifacts, such as the standard kilogram, reference materials for chemical measurement, or pieces of equipment, such as the flow rate standards.**
- 2- Providing a high-accuracy non-routine calibration and testing services.**
- 3- Conducting training, seminars, workshops, etc.**

## Activities of JMS

- 4- Providing calibration services to the national calibration laboratories.**
- 5- Representing Jordan in the national, regional and international metrological activities.**

# **Metrological Infrastructure in Jordan**



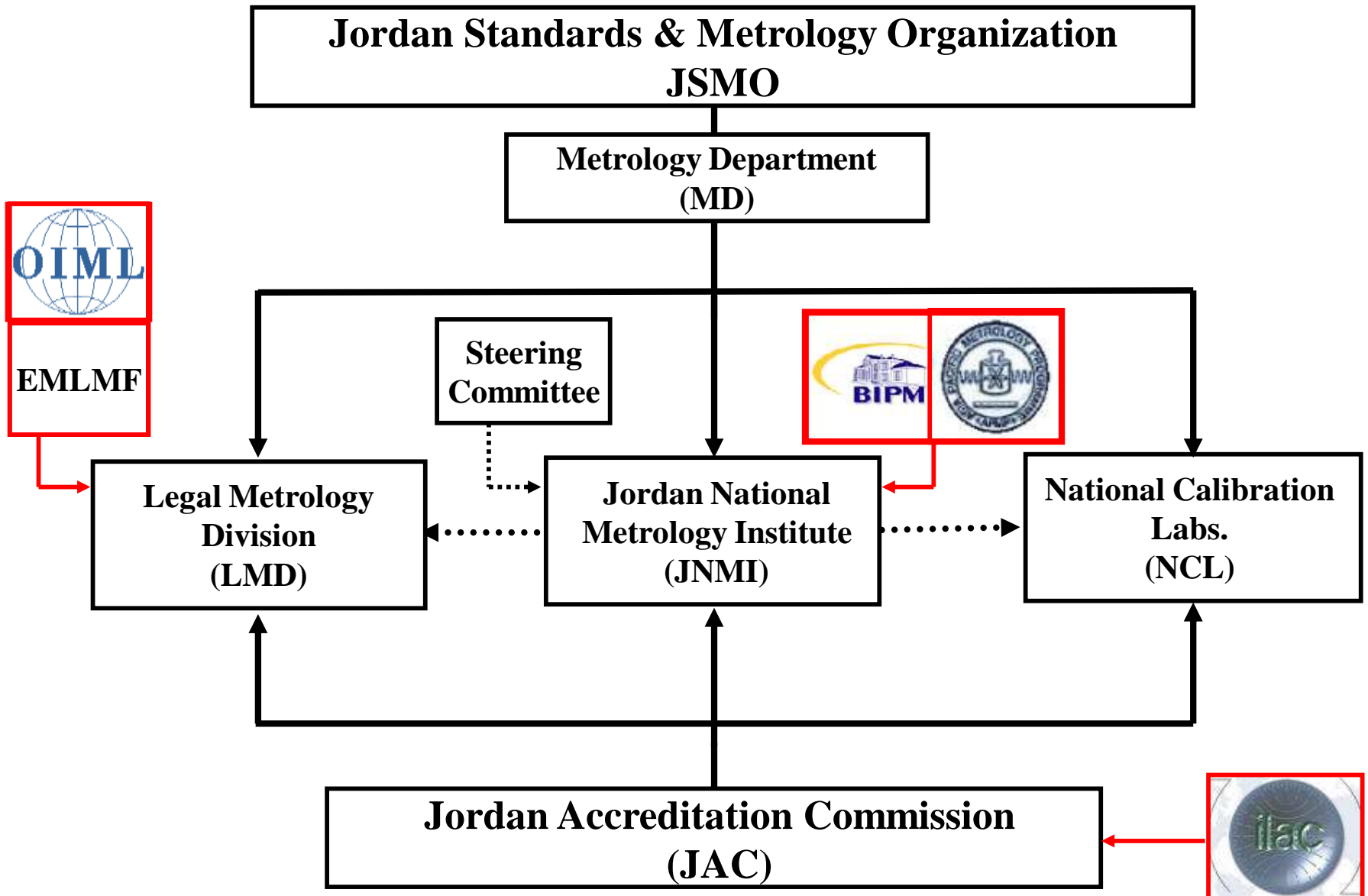
## **Voluntary Area**

- **JSMO**
- **RSS**
- **RJAF**
- **Other private calibration labs**

## **Mandatory Area**

- **JSMO Verification Offices**
- **Approved Verification Centers.**

# Organizational Structure of JMS



## **Tasks of the Jordan National Metrology Institute**

- **Maintaining the national standards, and trace them to international standards.**
- **Providing calibration services to the NCLs, VL, industrial and other customers from inside or outside the country.**
- **Following up on scientific development concerning the SI Units.**
- **Representing Jordan in activities related to national, regional and international metrology activities.**
- **Carrying out inter-comparisons with other NMIs.**
- **Carrying out metrology researches and conducting training courses in the area of metrology**
- **Offering technical advice for the government in the area of metrology**

## Tasks of the Steering Committee

- **Monitor the tasks and activities of the JNMI.**
- **Approve the regulations of the JNMI.**
- **Approve the strategy and public policy of the JNMI.**
- **Decide which regional and international institutions, JNMI should join.**
- **Approve the fess paid by customers.**
- **Approve national standards.**
- **Approve JNMI budget.**
- **Approve the staff responsible directly to keep the national standards.**

# **Members of the Steering Committee**

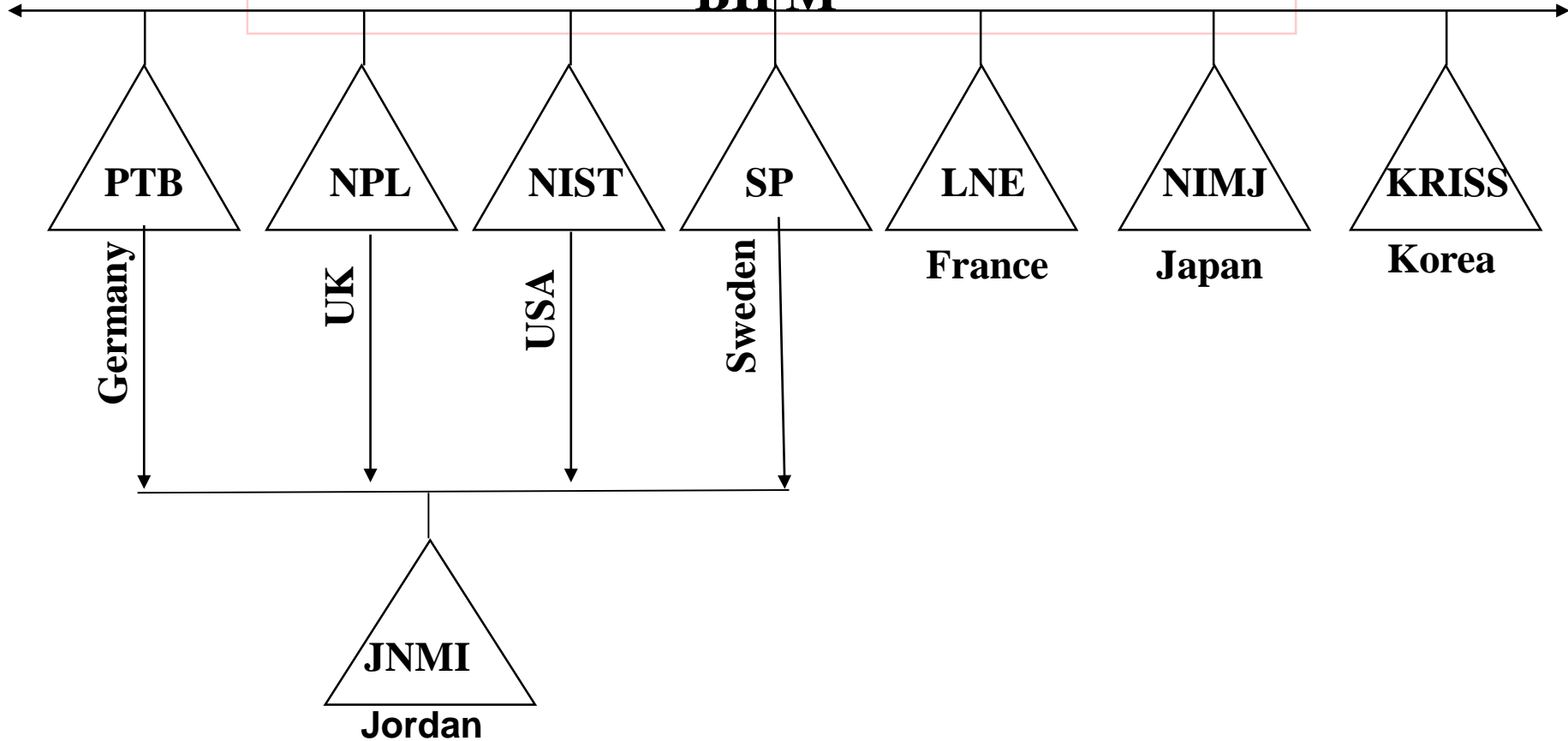
- **JSMO Director General – Chairman**
- **Director of Metrology Department in JSMO.**
- **Director of Accreditation in JAC.**
- **2 Representatives from RSS.**
- **Representative from RJAF.**
- **Representative from HCST( Higher council for science & technology ).**
- **Representative from the Chamber of Industry.**
- **Representative from the Chamber of Commerce.**



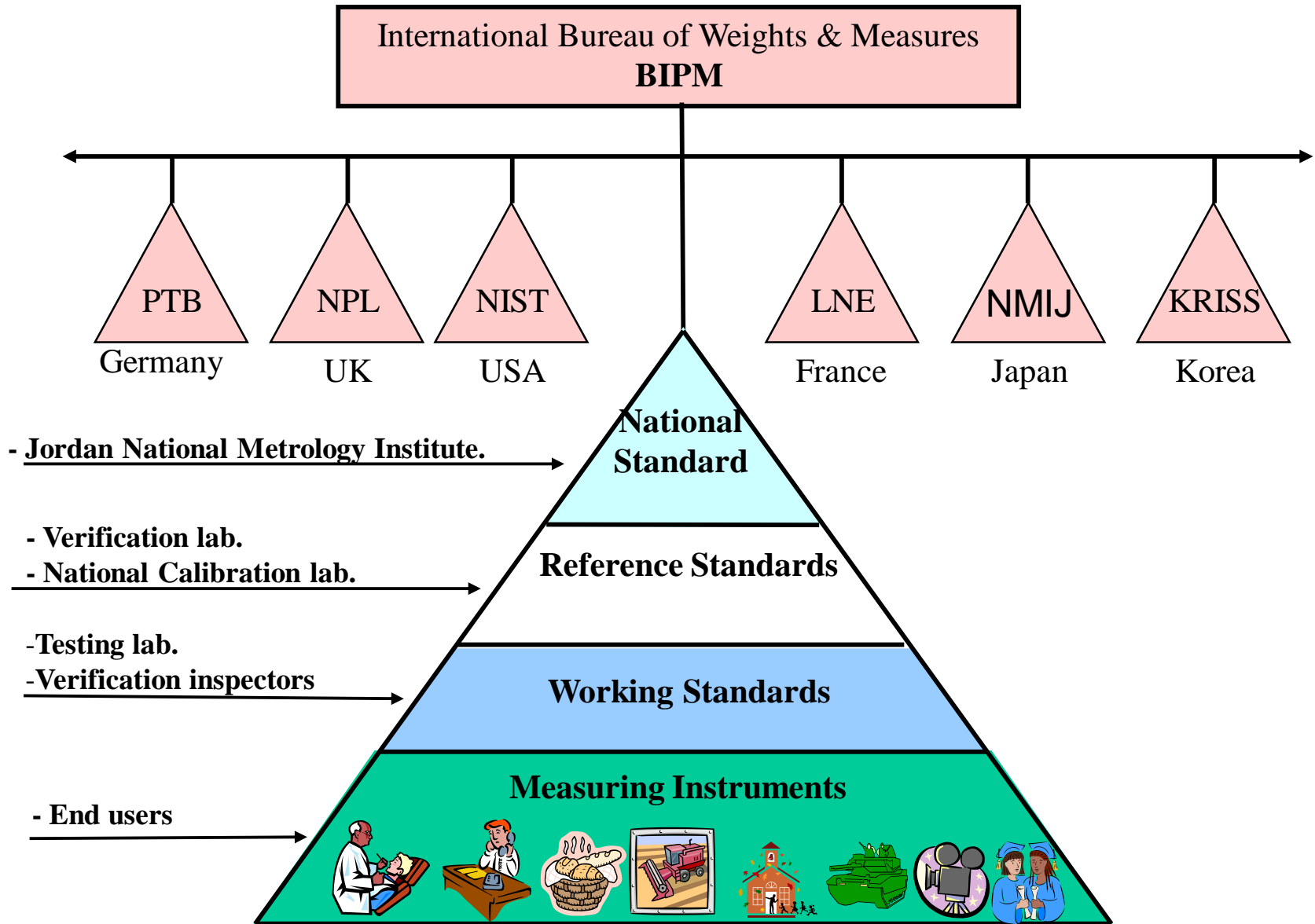
# Traceability of Measurement in Jordan

**International Bureau of Weights & Measures**

**BIPM**



# Traceability of Measurement



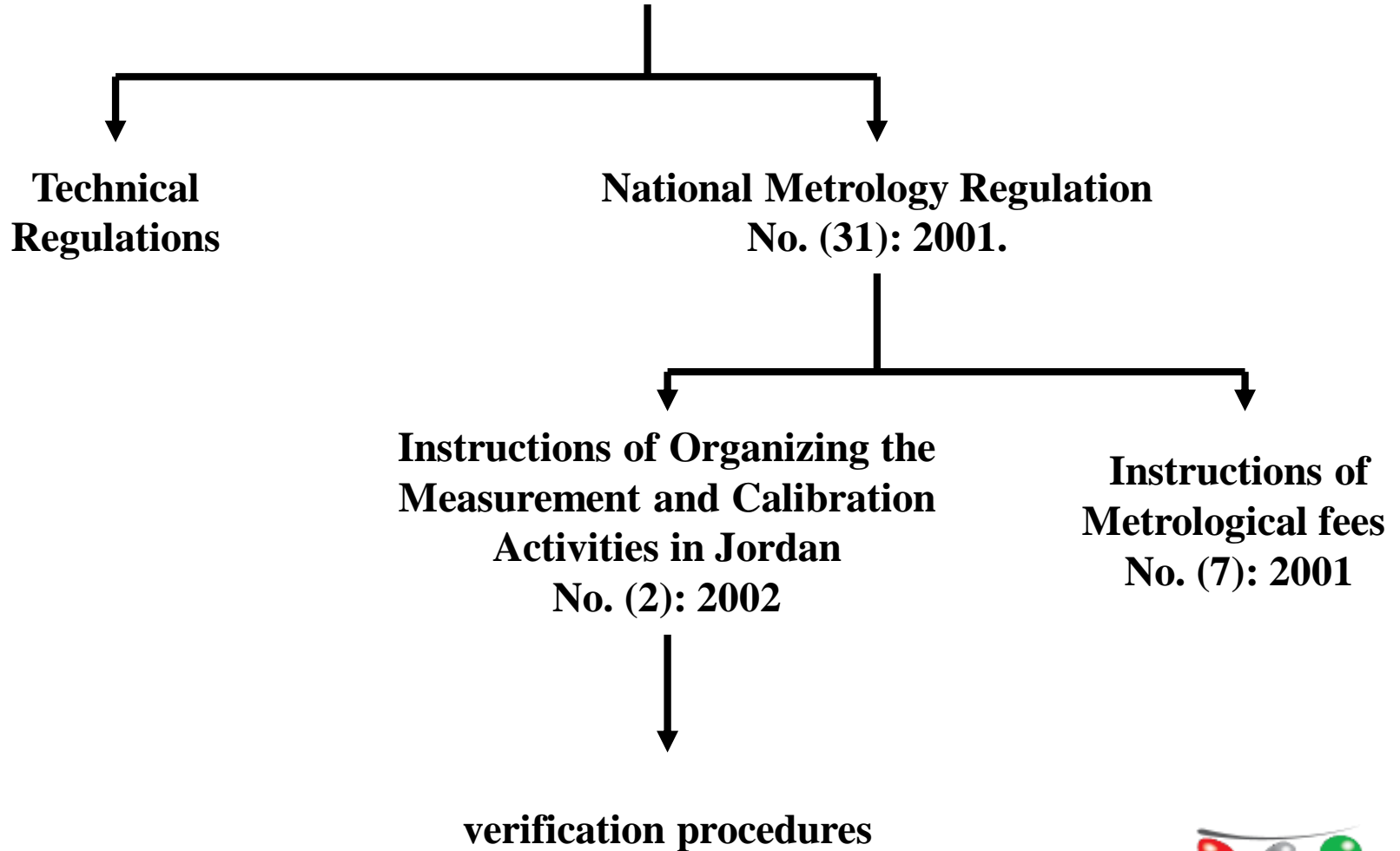
# **Legal Metrology System in Jordan**

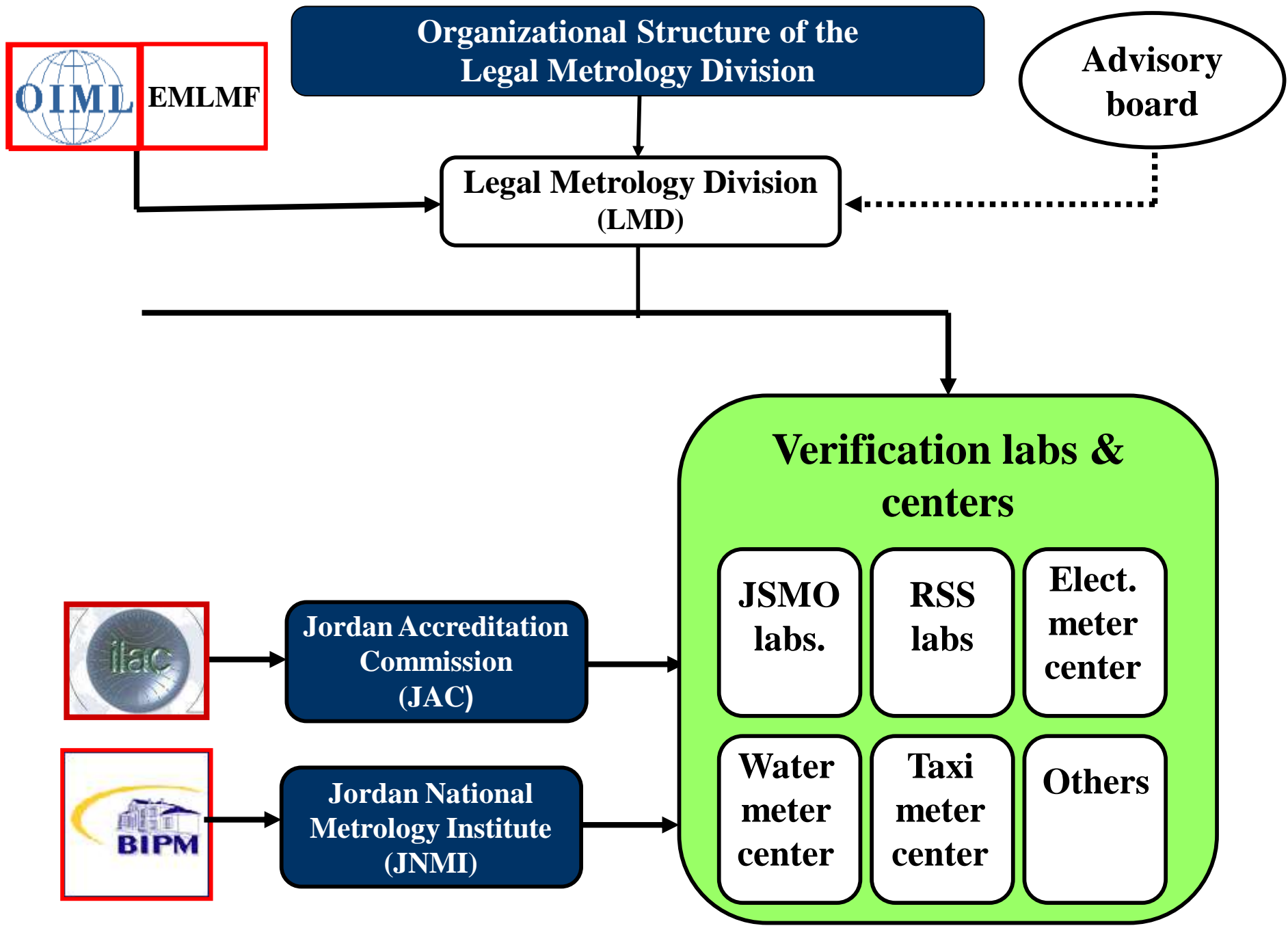
# Main objectives of Legal Metrology

- **Citizen protection in the field of environments, health and safety**
- **Fair trade.**
- **Elimination of conflict of interests.**
- **Harmonization of metrology by cooperation in national, regional and international bodies.**
- **Traceability to SI units**

# The hierarchy of regulations in legal metrology in Jordan

## Standards and Metrology Law No. (22):2000+ Ammend 2015





**Organizational Structure of the  
Legal Metrology Division**



**Legal Metrology Division  
(LMD)**

**Verification labs & centers**

JSMO labs.	RSS labs	Elect. meter center
Water meter center	Taxi meter center	Others



**Jordan Accreditation  
Commission  
(JAC)**



**Jordan National  
Metrology Institute  
(JNMI)**

# Tasks of the Legal Metrology Division

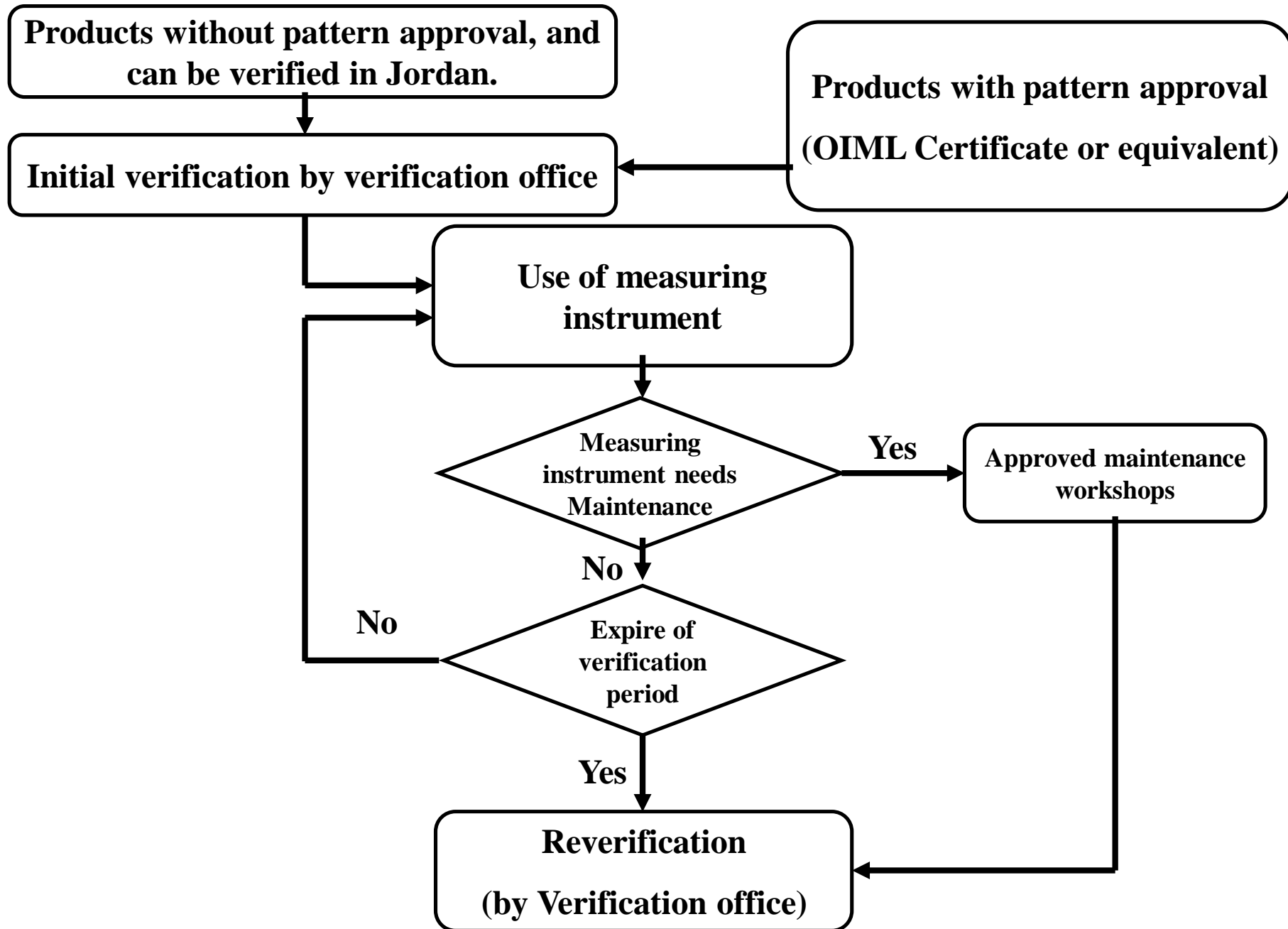
- Initial verification
- Periodical verification
- Checking of prepackages
- Market surveillance
- Approval of verification laboratories
- Surveillance on verification laboratories

# The tasks of verification

- **Control** of a measurement device under legal requirements
- **Calibration** to see if the legal demands are fulfilled.
- **Adjustment** if necessary to bring the display into stipulated tolerance.
- **Prevent** its use if  $\text{error} > \text{MPE}..$



# Verification cycle



# Requirements for legal measuring instruments in Jordan

<b>Tool</b>	<b>Pattern approval certificate</b>	<b>Initial verification</b>
<b>Fuel meters</b>	<b>Yes</b>	<b>Yes</b>
<b>Taxi meter</b>	<b>Yes</b>	<b>Yes</b>
<b>Electricity meters</b>	<b>Yes</b>	<b>Yes</b>
<b>Water meter</b>	<b>Yes</b>	<b>Yes</b>
<b>Weighing bridge</b>	<b>Yes</b>	<b>Yes</b>
<b>Jewelry balances</b>	<b>Yes</b>	<b>Yes</b>
<b>Tyre pressure gauge</b>	<b>No</b>	<b>Yes</b>
<b>Clinical thermometer</b>	<b>No</b>	<b>Yes</b>
<b>Blood pressure manometer</b>	<b>No</b>	<b>Yes</b>
<b>Length measuring</b>	<b>No</b>	<b>Yes</b>

# **Measuring Instruments under Legal Control in Jordan**

## Instructions No. (2) for the year 2002

# Instructions of Organizing the Measurement and Calibration Activities in Jordan

### Measuring Instruments subject to legal metrological control and periodic verification

#### 1-a Weighing instruments such as:

- Scales and weights used in trade.
- Scales and weights used in gold shops.
- Scales and weights used in testing and inspection laboratories.
- Weighing bridges.

#### 1-b - Length measures used in trade.

#### 1-c - Different fuel meters and measures.

#### 1-d - Taximeters.

#### 1-e - Clinical thermometers.

#### 1-f - Blood pressure manometers.

#### 1-g - Cold water meters for household.

#### 1-h - Electrical power consumption meters for household.

## 2- Content of Prepackages

# **New measuring instruments added to the list of Measuring Instruments subject to legal metrological control & periodic verification**

- 1- Tyre pressure gauge**
- 2- Thermometers and temperature recorders used for food preservation.**
- 3- Force measuring system of uni-axial material testing machines**

# Main Challenges Facing Metrology Department in Jordan

## Technical

- Measuring systems controlled by software can be easily manipulated.
- Short innovation cycles in industry
- MD involved in many activities not related to metrology.

## Economical

- Lack of human resources, funds & premises.
- Low margin of profit (in some fields), encourages some traders to cheat.
- Jordan is a small and open country, therefore huge investment in verification offices is needed for verifying limited number of measuring instruments.

**Thank you**