



Speed up your compliance

# Accreditation and management of labs

Tunis, 23 April 2018



# Scope

The study describe:

- environments,
- proceedings
- And methods

To:

- Set up,
- manage,
- and maintain a test laboratory

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Setting  
up

A green oval button with a white border and a slight shadow, containing the text "Manage".

Manage

A blue oval button with a white border and a slight shadow, containing the text "Maintain".

Maintain

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**Set up**

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**Manage**

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**Maintain**

# **How to set up a new laboratory?**

# General requirements



Regulatory and institutional



Infrastructure



acquisitions



Training and support

# Regulatory and institutional

- Adaptation of legislation
- Authorities for market control
- notification authorities
- Standards Body
- metrology body
- Accreditation Body
- Normative scope to cover for accreditation
- ARM signature

# Civil Engineering Infrastructure



- Architectural plan
- Engineering constraints
- Power constraints
- Climatic constraints
- Fire protection constraints

# acquisitions

- anechoic rooms
- shielded rooms
- Testing Facilities
- software
- ...

- Fix the needs
- Write and launch tenders
- Receiving equipment
- Operating equipment
- ....



# Training and support



- Training activities on:
  - The regulatory aspects
  - Technical aspects
  - The quality aspects
- support actions
  - Fixing needs
  - Transposition of directives and standards
  - Writing specifications of acquisitions
  - Writing technical procedures
  - Quality Management System
    - ✓ Quality Manual
    - ✓ quality procedures
  - Uncertainty budget
- Pre-audit in view of accreditation

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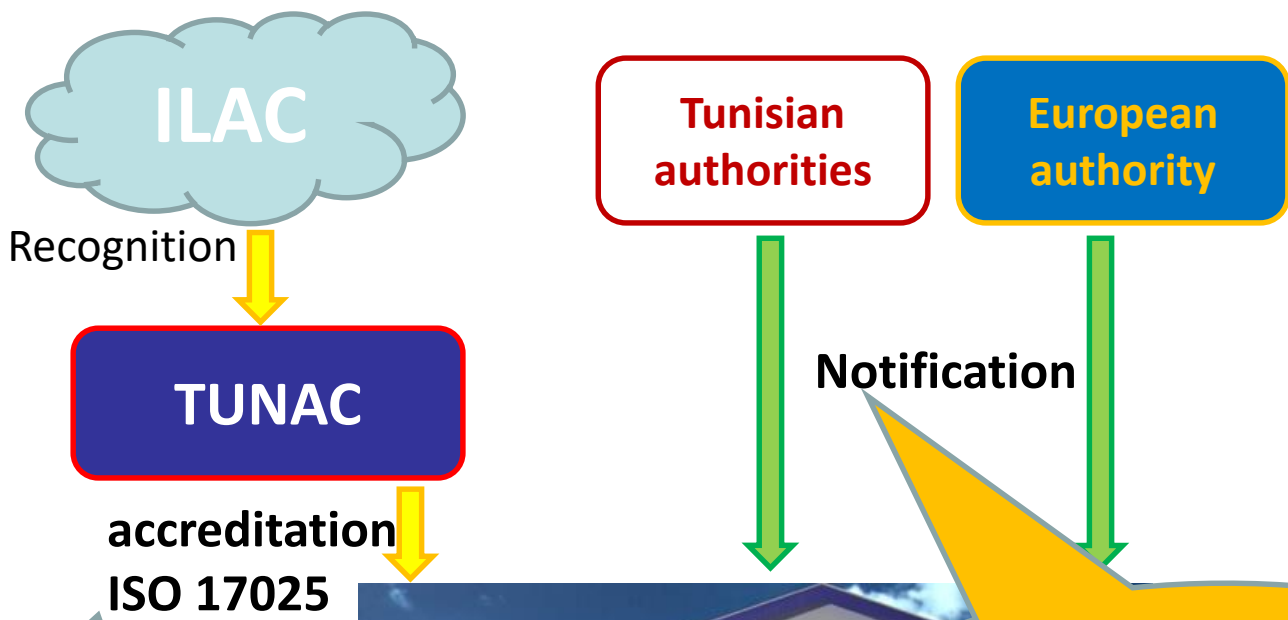
# Technical activity

- Plan test campaigns;
- manage product / service subject to test;
- Follow the non-conformities;
- Drafting and revision of test reports;
- monitor the test activities.
- Outsourcing when lack of equipment and/or competence

# Definition

## accreditation

Procedure by which an authoritative body gives formal recognition that an organization or individual is **competent** to perform specific tasks



**Formal recognition of the technical competence**

**Authorization to perform the compliance check**

**Test reports recognized by the authorities**

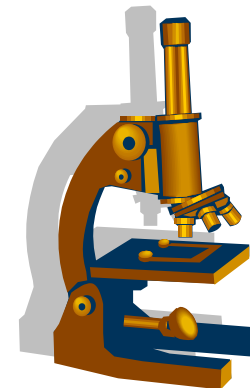


# accreditation according to the standard ISO 17025

- ISO / IEC 17025 contains of the criteria proving the skill of a test laboratory
  - Management requirement
  - Technical requirements
- accreditation is a formal recognition of the lab's competence

# The laboratory accreditation

According to the standard  
EN ISO / IEC 17025



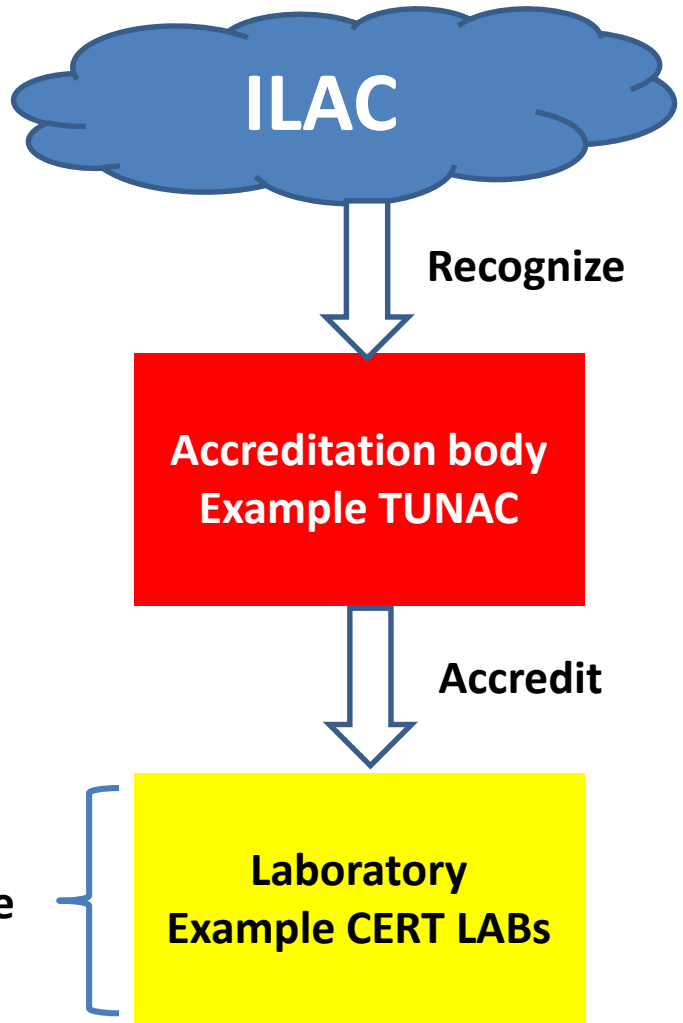
# Accreditation bodies



Accreditation bodies are established in many countries with the primary purpose of ensuring that conformity assessment bodies are subject to oversight by an authoritative body.



- The International Laboratory Accreditation Cooperation (ILAC) first started as a conference in 1977.
- The aim was to
  - develop international cooperation
  - facilitate trade
  - Promote the acceptance of accredited test and calibration results.
- In 1996, ILAC became a formal cooperation with a charter to establish a network of mutual recognition agreements among accreditation bodies that would fulfil this aim.



accreditation scope



# Benefits (1)

- Increase of confidence in Testing/ Calibration data and of personnel performing work.
- Potential increase in business due to enhanced customer confidence and satisfaction.

# Benefits (2)

- Greater access for products
- Saving time and money
  - no need for re-testing of products.
- Improved national and global reputation and image of the laboratory.
- Continually improving data quality and laboratory effectiveness.

# Auditing

- Two types of auditing are required
  - Management audit
  - Technical audit

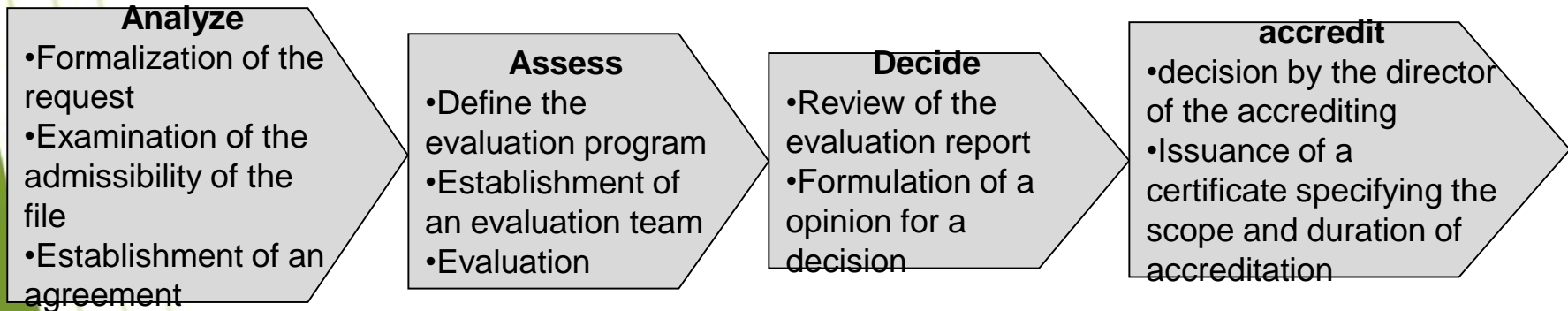
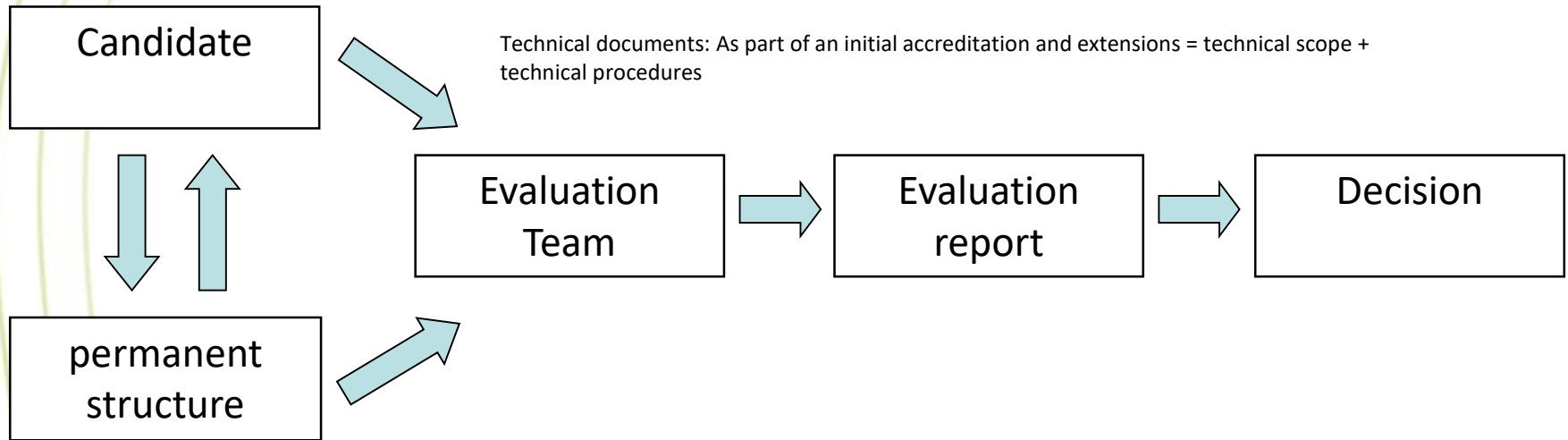
# MANAGEMENT REQUIREMENTS

- 1) Organization
- 2) Management System
- 3) Control of documents
- 4) Review of applications, appeals and supply contracts
- 5) Subcontracting of tests and calibrations
- 6) Purchases of services and supplies
- 7) Customer services
- 8) Claims
- 9) Control of test work and / or calibration
- 10) Improvements
- 11) Corrective Actions
- 12) Preventive actions
- 13) Control of records
- 14) Internal audits
- 15) Management review

# TECHNICAL REQUIREMENTS

- 1) General
- 2) Personal
- 3) Equipment and environmental conditions
- 4) Methods of testing and calibration and validation methods
- 5) Equipment
- 6) Measurement Traceability
- 7) Sampling
- 8) Manutentions of test and calibration items
- 9) To ensure the quality of test and calibration results
- 10) Test report

# The accreditation process





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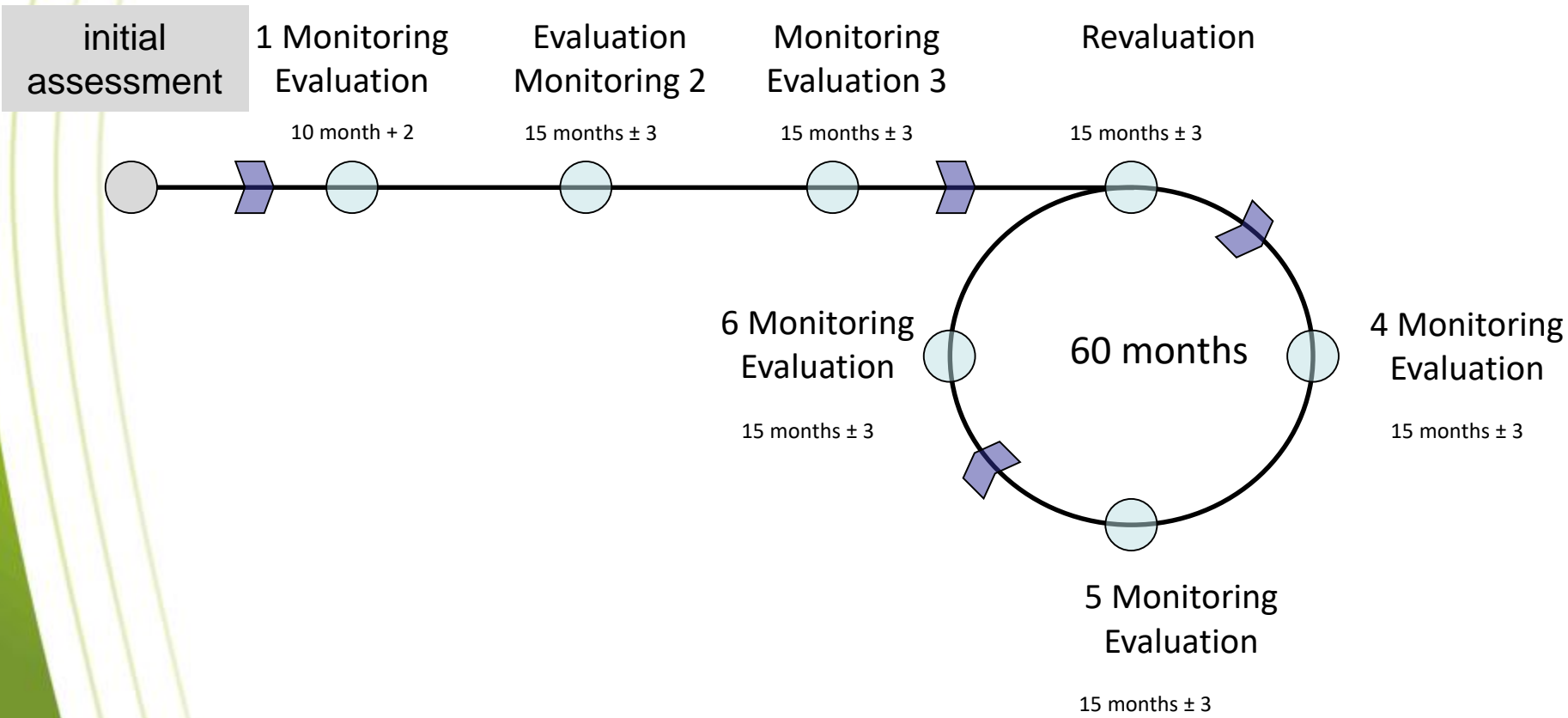
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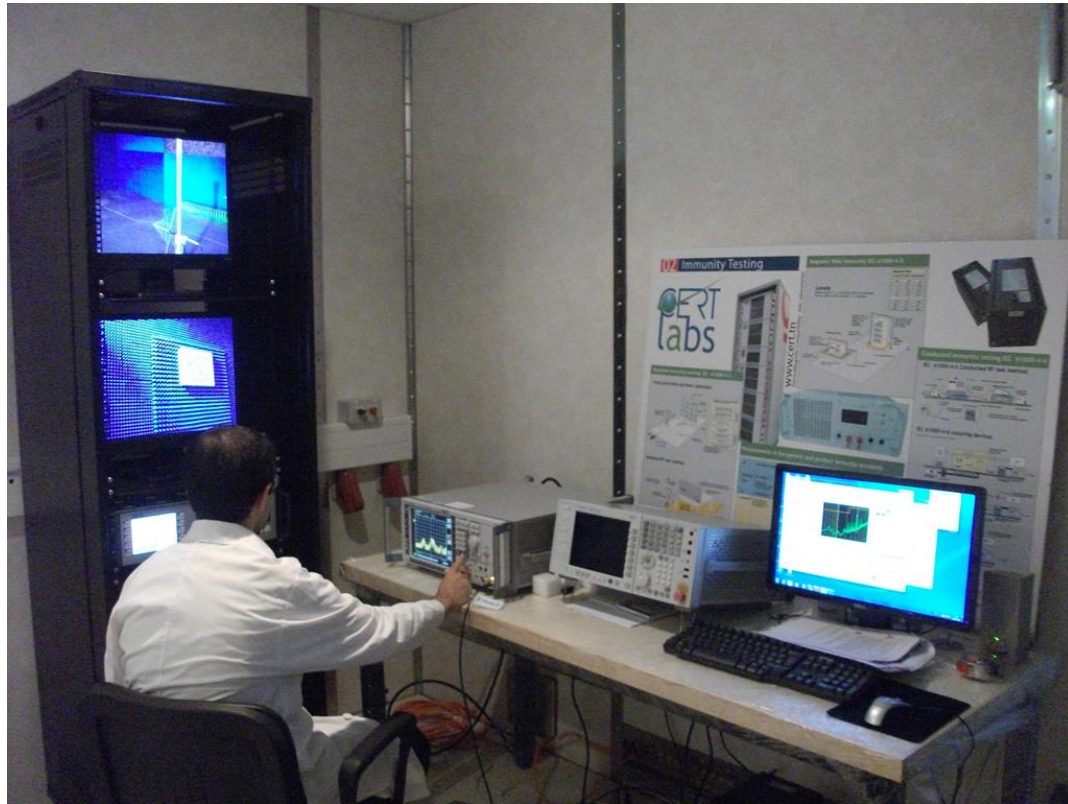
# update activities

- Maintenance instrumentation
  - Periodic calibration
  - Software Updates
  - Hardware maintenance
- Renewal of accreditation
- Proficiency tests
- investment
- standard and regulation watch

# The accreditation cycle



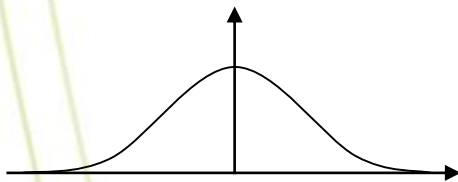
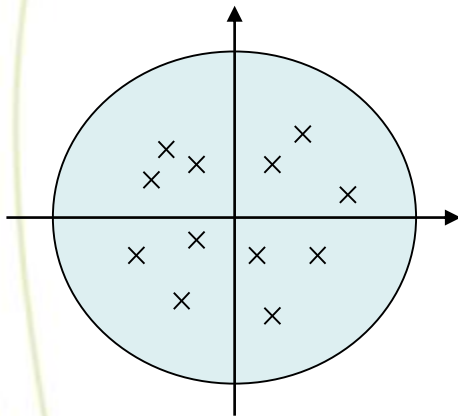
# Maintaining technical capacity



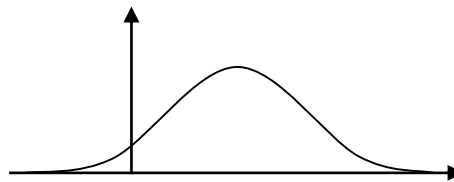
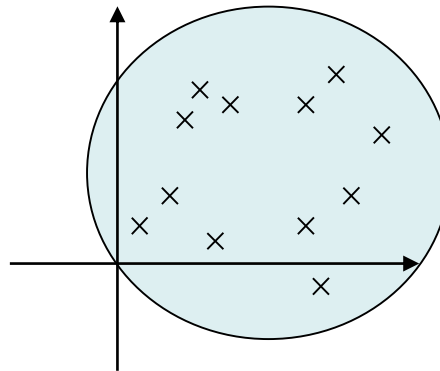
- selected methods from
  - Standards
    - international
    - regional
    - national
  - eminent scientific organizations
- methods developed and validated by the laboratory
- Methods specified by the client

# Uncertainty of test methods

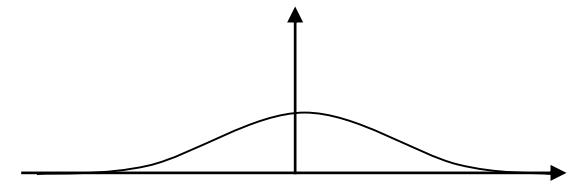
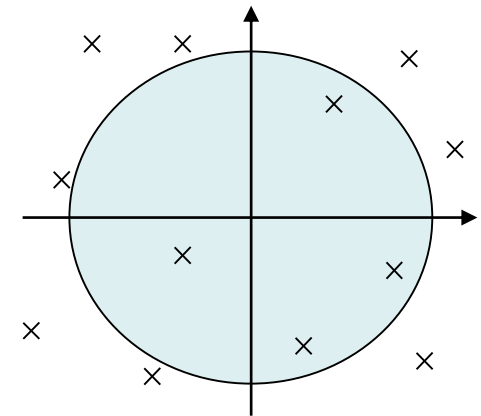
Just  
Precise



No just  
Precise



Just  
Not precise

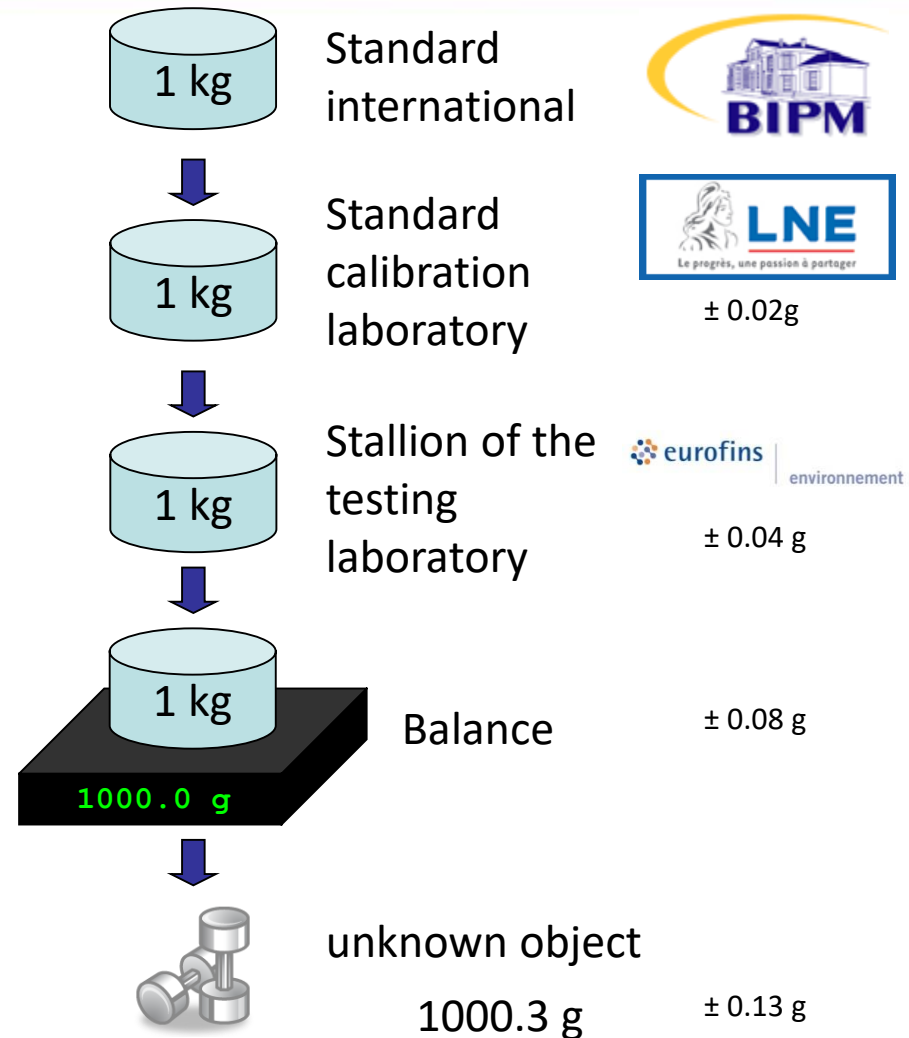


The precision determines the uncertainty (eg  $3V / m \pm 5\%$ )

# Measurement Traceability

- **Definition**

Property of a measurement or standard that can be connected to stated references, usually **national standards** or international through **uninterrupted chain** comparison with all of the reported uncertainties.



# Proficiency tests







CERT  
labs

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**Thank you**

