



Overview of ISO 17025 standard

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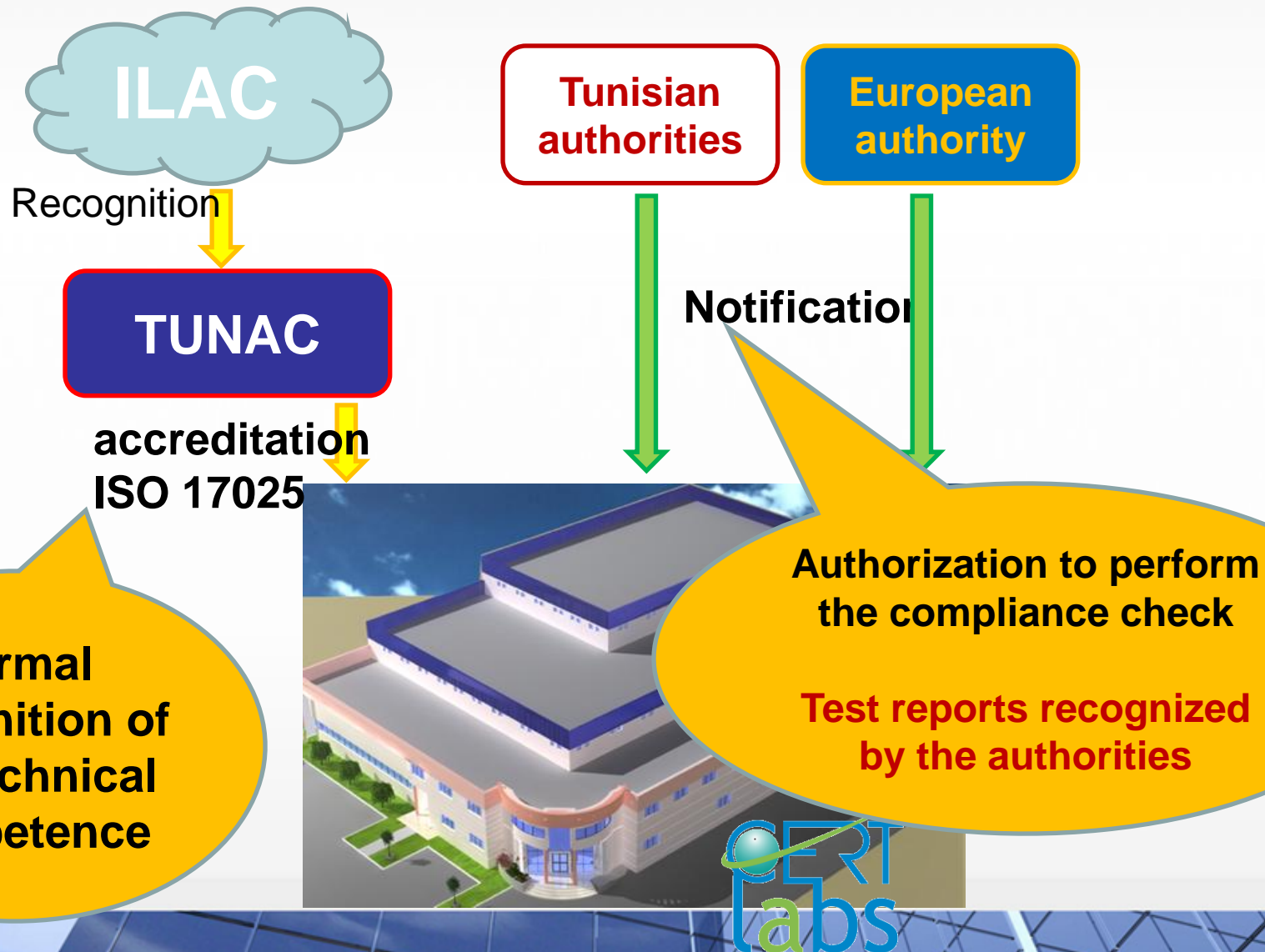
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Definition

accreditation

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

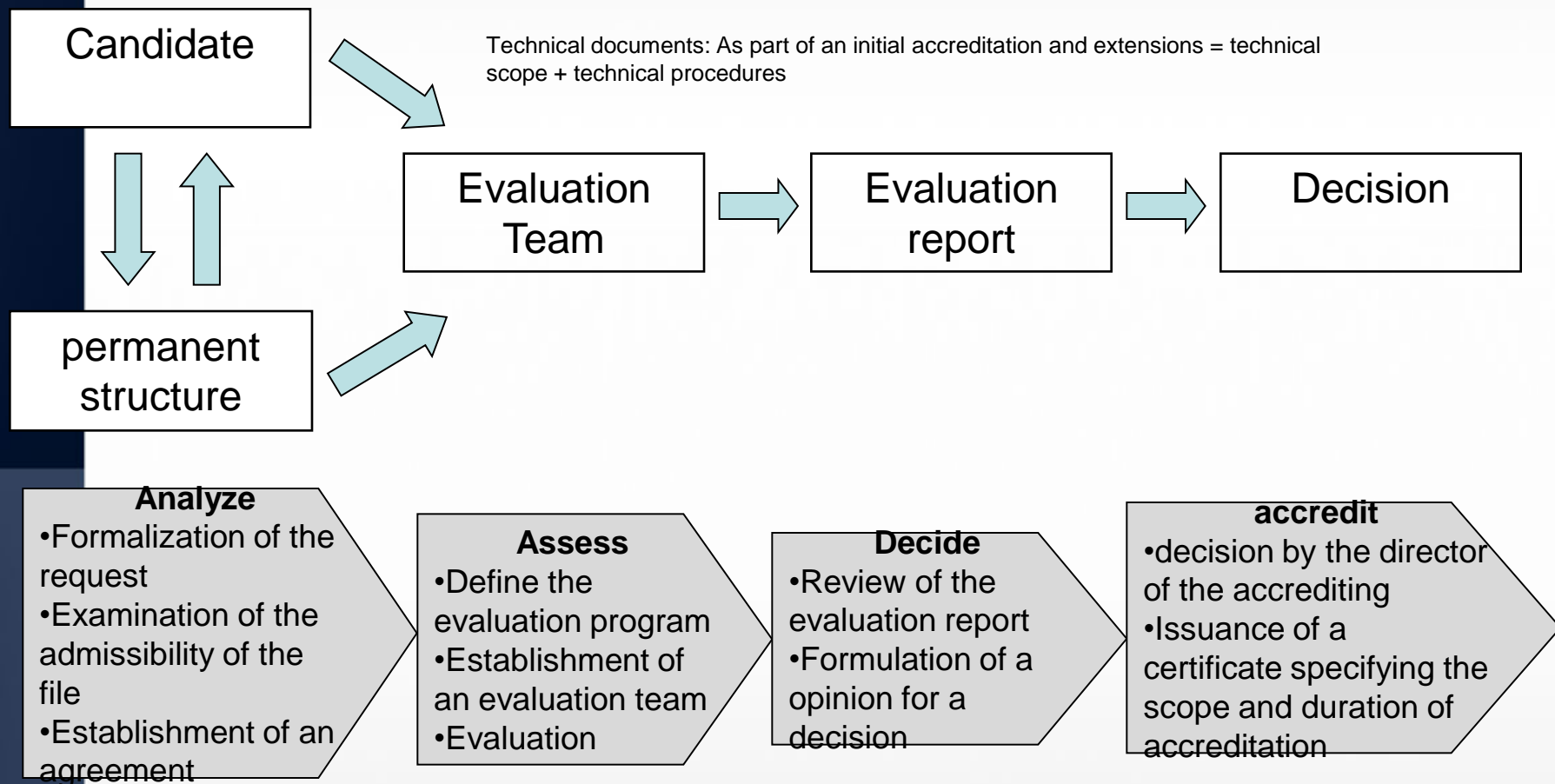
Laboratory recognition



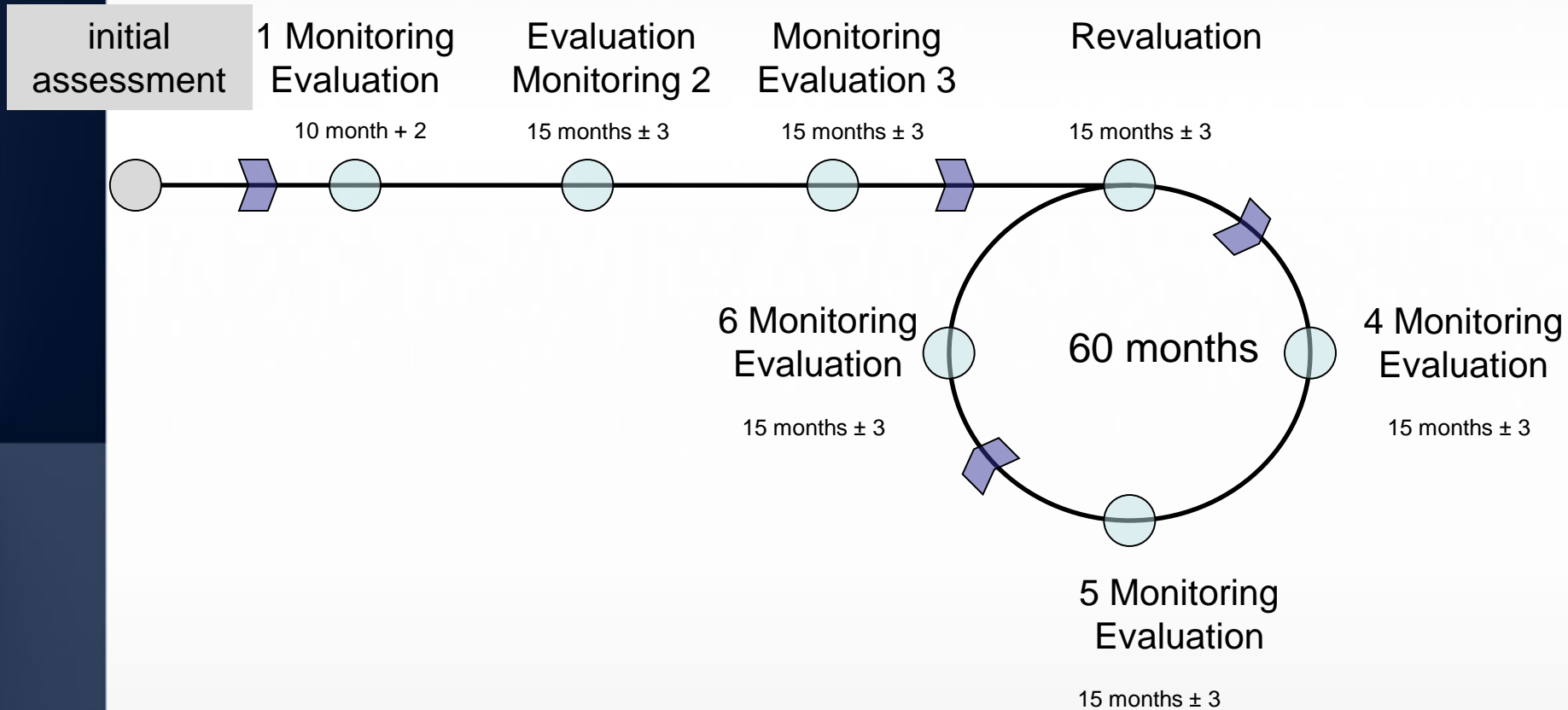
Accreditation Repositories

Activity	repository
testing laboratories, analysis or calibration	ISO / IEC 17025
Inspection Bodies	ISO / IEC 17020
quality systems and technical business skills	EN 45012 / ISO Guide 62
Environmental Management Systems	ISO Guide 66
personal	EN 45013 / ISO Guide 17024
certification	ISO / IEC 17065
Services	IN 45011
environmental verifiers	EMAS

The accreditation process

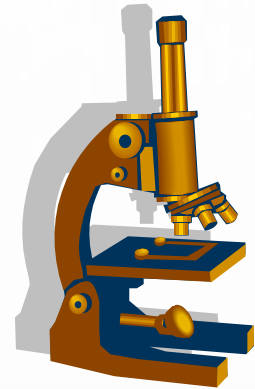


The accreditation cycle



The laboratory accreditation

According to the standard
EN ISO / IEC 17025



Accreditation body

- In Tunisia, laboratory accreditation is carried out by TUNAC according to standards:
 - EN ISO / IEC 17025
 - managerial requirements (\approx ISO 9001)
 - technical requirements
 - Reference Document TUNAC
 - Analysis of technical Standards

MANAGEMENT REQUIREMENTS

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

managerial requirements

- Organization and Management
- quality system
- Mastery of documentation
- Complaints, nonconformities and corrective and preventive action
- recordings
- Management reviews

➔ ISO 9001 Requirements

specific managerial requirements (1)

- The staff must have technical supervision **authority** and the **resources** necessary to perform its functions and identify any gaps
- Arrangements are made to ensure that the management and staff do not have **commercial pressure**
- The laboratory ensures **confidential** data protection and customer ownership
- A **organizational chart** of laboratory structure

specific managerial requirements (2)

- It takes a quality manager who must have (irrespective of other functions) a **authority** to ensure that the quality system is implemented and observed at all times. It must have access to management.
- Must appoint **substitutes** for supervisors
- Staff should be **aware** of the importance of its activities and how it contributes to achieving the objectives of laboratory

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

technical requirements

- Staff competence
- Ambient conditions
- Test method and calibration

Staff competence

- Qualified
 - Studies
 - formations
 - Experience
 - Skills
 - Training Policy
- set jobs
 - Job description



Ambient conditions and facility

- Monitoring and mastery of environmental conditions
- Separation of incompatible activities
- limited access / regulated

Facilities

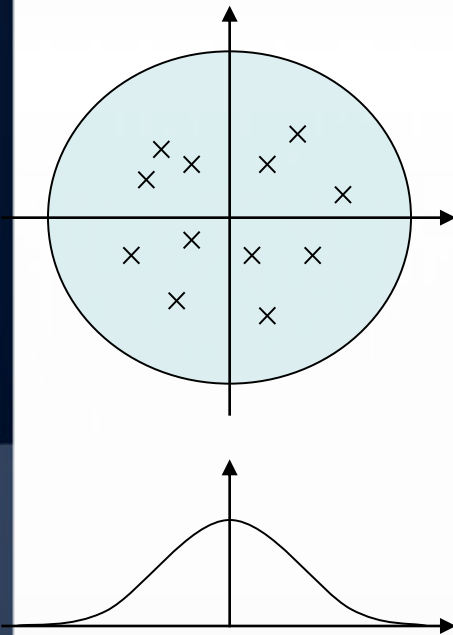
- In operating condition
 - Commissioning
 - metrological connection
 - Calibrations
 - Maintenance, preventive maintenance
- Customized
- Used by a competent and authorized

Test methods

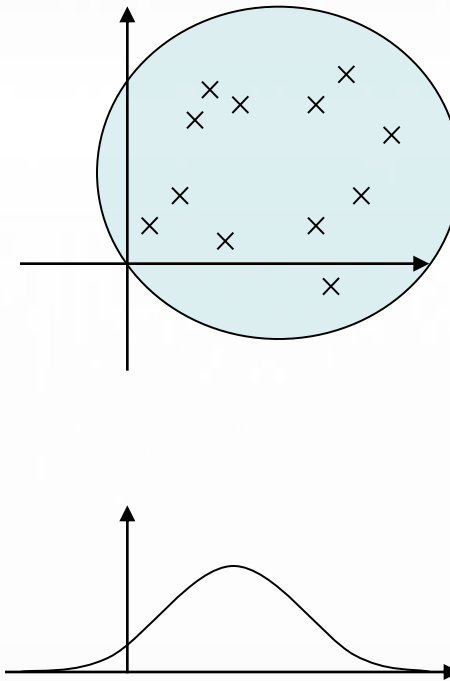
- selected methods from
 - Standards
 - international
 - regional
 - national
 - eminent scientific organizations
- methods developed and validated by the laboratory
- Methods specified by the client

Uncertainty of test methods

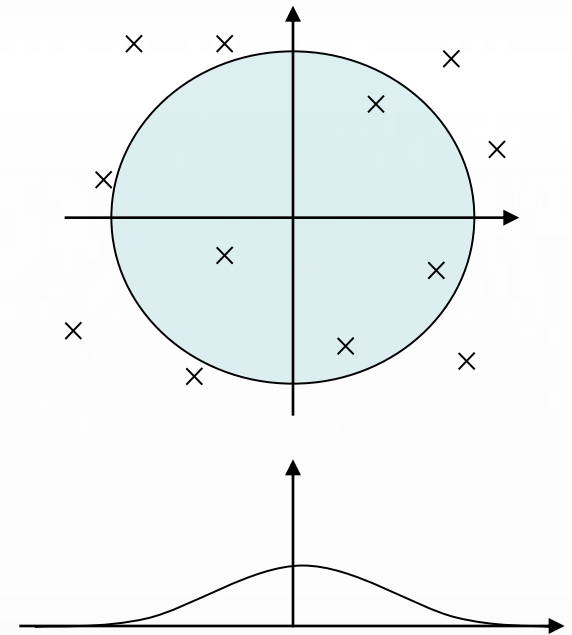
Just
Precise



No just
Precise



Just
Not precise

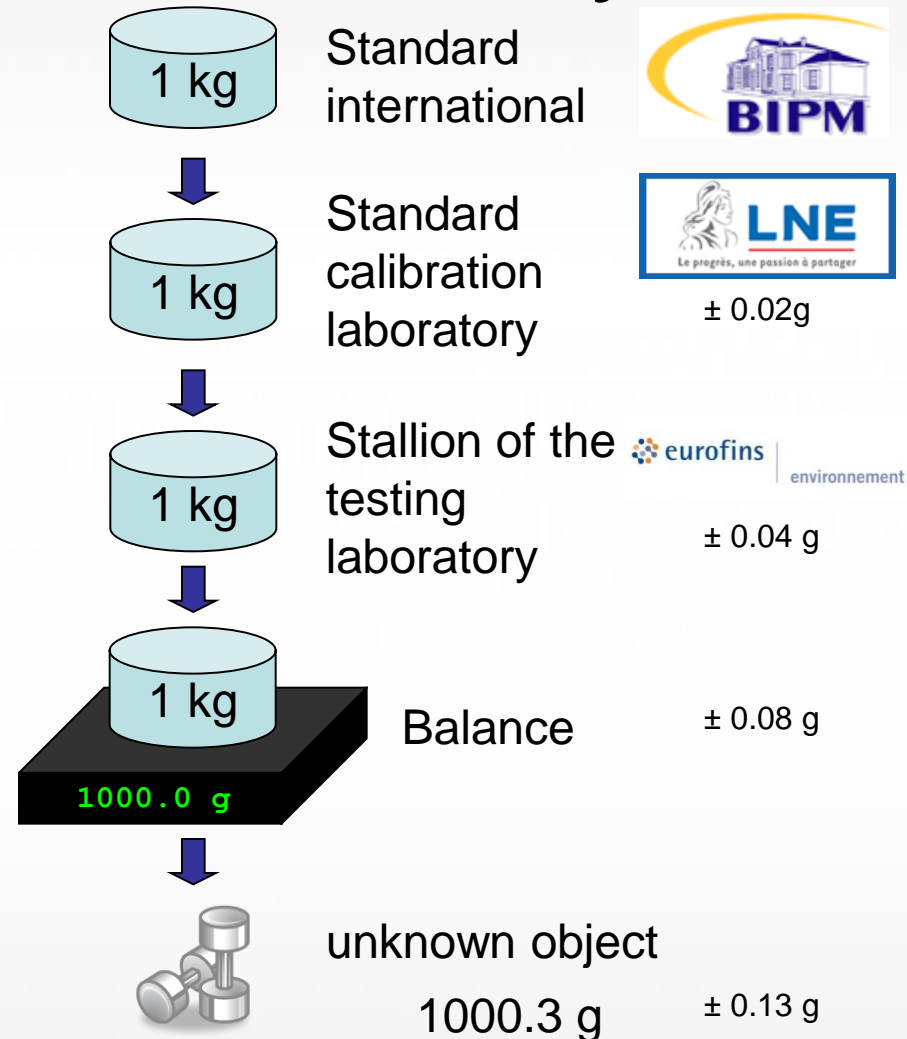


The precision determines the uncertainty (eg $3V / m \pm 5\%$)

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





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