



# Rapid Diagnostic Tool – Legal Metrology

Questionnaire



|        |  |    |
|--------|--|----|
|        | Introduction                               | 3  |
|        | Legal Metrology                            | 4  |
| 1.     | Rapid Diagnostic Tool evaluation questions | 4  |
| 1.1.   | Legal and institutional framework          | 4  |
| 1.1.1. | Legal Metrology Strategy                   | 4  |
| 1.1.2. | Legal Entity                               | 5  |
| 1.1.3. | Governance                                 | 6  |
| 1.1.4. | Financial sustainability                   | 7  |
| 1.2.   | Administration and infrastructure          | 8  |
| 1.2.1. | Director                                   | 8  |
| 1.2.2. | Organizational structure                   | 9  |
| 1.2.3. | Management and personnel                   | 10 |
| 1.2.4. | Premises                                   | 11 |
| 1.2.5. | Equipment                                  | 12 |
| 1.2.6. | Quality management system                  | 13 |



Table of contents continued on next page

|        |   |    |
|--------|---|----|
| 1.3.   | Service delivery and technical competency | 14 |
| 1.3.1. | Legal metrology technical staff           | 14 |
| 1.3.2. | Type approval of measuring instruments    | 15 |
| 1.3.3. | Calibration and verification services     | 16 |
| 1.3.4. | Market surveillance                       | 17 |
| 1.3.5. | Training system                           | 18 |
| 1.4.   | External relations and recognition        | 19 |
| 1.4.1. | Liaison with regional organizations       | 19 |
| 1.4.2. | Liaison with international organizations  | 20 |
| 1.4.3. | Coordination within the QI                | 21 |
| 1.4.4. | Designated organizations                  | 22 |
| 1.4.5. | Consultative forum                        | 23 |

# Introduction

## Aims of the Rapid Diagnostic Tool

This Module 4: Rapid Diagnostic Tool is designed to provide its users with rapid feedback on the state of a country's Quality Infrastructure (QI) as regards (i) legal and institutional framework, (ii) administration and infrastructure, (iii) service delivery and technical competency, and (vi) external relations and recognition. The Rapid Diagnostic Tool is based on the Comprehensive Diagnostic Tool, on the same four pillars (see Module 1), but is nowhere near as comprehensive.

The Rapid Diagnostic Tool consists of a series of questions resulting in quantitative answers. The answer to each question is given a value, a series of which are compounded. The values can then be shown as a radar diagram which may help to reach a decision whether it is worthwhile conducting a comprehensive assessment of the QI of the specific country. The Rapid Diagnostic Tool is designed to provide a high-level snapshot of the state of the QI of a country and indicate a need for further development.

## Structure of the questions of the Rapid Diagnostic Tool

The questions deal with a number of major elements for each QI service. For each of the elements, a series of questions need to be answered. A few of these will be for information only, but most of them will be scored depending on how well they meet the stated benchmark. The scoring is based on a 0 to 4 points system, and the evaluation of the aggregated scores can be broadly considered as follows:

- Score 0 to 1.0: Little or nothing is in place and the country has to develop the relevant element from scratch;
- Score 1.1 to 2.0: Rudimentary systems and in need of much fundamental development;
- Score 2.1 to 3.0: Reasonable system in place but in need of further development;
- Score 3.1 to 4.0: Good system – no need for fundamental development, but maintenance is important.

Aggregate scores should be calculated to at least one decimal place to allow for a meaningful depiction in the radar diagram. But, the quantitative analysis is a very coarse one, and the aggregate scores should not be taken as absolutes. They provide a quick reference as to the current state and future development of the QI. This tool does not replace a proper assessment of processes such as would be undertaken to determine compliance with for example ISO 9001, ISO/IEC 17025 or other in-depth management system assessment techniques. It is designed to be used in the Toolkit Workflow as described in Module 1.

## Using the results of the Rapid Diagnostic Tool

The output of the Rapid Diagnostic Tool is a set of numbers. These can be utilised quite readily to develop the graphical depiction of the state of the QI or of its relevant elements in the “Building Block” approach or with radar diagrams as detailed in Modules 1 and 5. These depictions can then be utilised to come to a decision as to whether a Comprehensive Diagnostic should be conducted. They can also be utilised by a country's institutions to benchmark themselves against international good practice.

When considering the outcome of such a Rapid Diagnostic, care should also be exercised when comparing it with the level of QI development as discussed in detail in Module 2 (see 2.2.3.). The outcome of the Rapid Diagnostic will be a very good indication whether a Basic QI is in place and will even provide some information regarding an Advanced QI. In order to gain a full understanding of the Advanced or Mature QI stages in a specific country, a Comprehensive Diagnostic will have to be conducted as described in Module 5.

# Legal Metrology

## 1. Rapid Diagnostic Tool evaluation questions

### 1.1. Legal and institutional framework

#### 1.1.1. Legal Metrology Strategy

Existing information/reporting/monitoring:

- Relevant Ministry (e. g. Trade and Industry) website
- Relevant Ministry papers
- Legal metrology authority website
- Annual Reports of the legal metrology authority

Benchmark:

A Legal Metrology Strategy giving effect to the implementation of the Quality Policy with regard to the establishment and maintenance of a legal metrology system in the country, is in place.

| Questions   | Score |
|---|-------|
| <p>a. Has a Legal Metrology Strategy applicable to all authorities developing and implementing legal metrology been developed and approved?</p> <p>Yes (= 4)<br/>           Applicable only to some authorities (= 3)<br/>           Developed, but not yet approved (= 2)<br/>           Being developed (= 1)<br/>           No (= 0)</p>   |       |
| <p>b. Does the Legal Metrology Strategy cover the following?</p> <ul style="list-style-type: none"> <li>■ The promulgation of new or revised legislation   Yes (= 0.5)</li> <li>■ Road map for the implementation of legal metrology measures over time in respect of specific measuring equipment whether trade, law enforcement, health and safety related   Yes (= 0.5)</li> <li>■ Alignment of regulations with OIML recommendations   Yes (= 0.5)</li> <li>■ Introduction of pre-packaging requirements or the revision of older regulations   Yes (= 0.5)</li> <li>■ Establishment of legal metrology inspection offices across the country   Yes (= 0.5)</li> <li>■ Capacity development with regard to transport, inspection equipment, etc. for market effective surveillance   Yes (= 0.5)</li> <li>■ Training system for legal metrology experts   Yes (= 0.5)</li> <li>■ Road map for the liberalization of calibration and verification activities, i. e. designation of private sector organizations to take over these functions from the state   Yes (= 0.5)</li> </ul> <p>Add scores</p> |       |
| <p>c. Has an Implementation Plan been developed and approved and is it being implemented?</p> <p>Yes (= 4)<br/>           Developed, but not yet implemented (= 1)<br/>           No (= 0)</p>  |       |
| <b>Aggregate score: Legal Metrology Strategy (a+b+c)/3</b>  |       |

### 1.1.2. Legal Entity

Existing information/reporting/monitoring:

- Legal Metrology Act/Decree and Regulations or similar
- Legal metrology authority's website and annual reports

Benchmark:

The legal metrology authority is a legal entity, or a defined part of a legal entity, with the mandate to establish and maintain the legal metrology system in order to safeguard the interests of society as regards measurements.

| Questions  | Score |
|--|-------|
| a. Has the legal metrology authority been established as a legal entity, i. e. by legislation?<br><br>Yes (= 4)<br>In preparation (= 1)<br>No (= 0)  |       |
| b. Have the following been provided for in the legislation?<br><br><ul style="list-style-type: none"> <li>■ Governance of the legal metrology authority   Yes (= 1)</li> <li>■ Finances of the legal metrology authority   Yes (= 1)</li> <li>■ The overall legal metrology system of the country   Yes (= 1)</li> <li>■ International / regional liaison   Yes (= 1)</li> </ul>                 |       |
| c. Is the legislation up-to-date, i. e. has it been reviewed recently?<br><br><ul style="list-style-type: none"> <li>■ Last review/revision less than 5 years ago   Yes (= 4)</li> <li>■ Last review/revision between 5 and 10 years   Yes (= 2)</li> <li>■ Last review/revision between 10 and 15 years   Yes (= 1)</li> <li>■ Last review/revisions older than 15 years   Yes (= 0)</li> </ul> |       |
| <b>Aggregate score: Legal Entity (a+b+c)/3</b>   |       |

### 1.1.3. Governance

Existing information/reporting/monitoring:

- Legal Metrology Act/Decree/Regulation or similar
- Ministerial decrees if relevant
- Legal metrology authority Council policy papers
- Legal metrology authority website and annual reports
- Government regulations regarding public entities

Benchmark:

The governance of the legal metrology authority is vested in a Government Department or in a Council that has the mandate to approve strategy, business plans and budgets and which holds the Director to account.

| Questions  | Score |
|--|-------|
| <p>a. Is the governance of the legal metrology authority vested in a high-level government official or an independent Council with appropriate knowledge regarding legal metrology matters and market needs?</p> <p>Yes (= 4)<br/>           Knowledge levels could be better (= 2)<br/>           No (= 0)</p>  |       |
| <p>b. Does the Director of the legal metrology authority have a direct communications line to the relevant political level to deal with legal metrology issues that have a possible political fallout?</p> <p>Yes, formal (= 4)<br/>           Through more than one level of bureaucracy (= 2)<br/>           Yes, ad hoc (= 1)<br/>           No (= 0)</p> |       |
| <p>c. Does the governance structure appoint the Director of legal metrology and hold him/her to account?</p> <p>Yes (= 4)<br/>           Appointment and accountability separated (= 2)<br/>           No (= 0)</p>  |       |
| <p><b>Aggregate score: Governance (a+b+c)/3</b></p>  |       |



#### 1.1.4. Financial sustainability

Existing information/reporting/monitoring:

- National Quality Policy
- Annual government budget allocations
- Annual reports of the legal metrology authority
- Monthly and annual financial statements of the legal metrology authority

Benchmark:

The finances from government, income from legal metrology services, financial support from industry and other sources are adequate to ensure the financial sustainability of the legal metrology authority in the medium to long term.

| Questions   | Score |
|---|-------|
| <p>a. Have adequate funds been committed for the continued existence of the legal metrology authority, e.g. by the government or any other entity/entities?</p> <ul style="list-style-type: none"> <li>■ 100 % of need covered   Yes (= 4)</li> <li>■ 85 % of need covered   Yes (= 3)</li> <li>■ 70 % of need covered   Yes (= 2)</li> <li>■ 50 % of need covered   Yes (= 1)</li> <li>■ Less than 50 % of need covered   Yes (= 0)</li> </ul> <p>Add scores</p> |       |
| <p>b. Do the funding agents, such as government or any other entity/entities, provide specifically for funding the establishment and maintenance of both the head office and any provincial and local offices?</p> <p>Yes (= 4)<br/>Every year there is a shortfall (= 2)<br/>No (= 0)</p>  |       |
| <p>c. Is specific funding (from the government or any other entity/entities or special fund) earmarked for the international and regional commitments of the legal metrology authority?</p> <p>Yes (= 4)<br/>Every year there is a shortfall (= 2)<br/>No (= 0)</p>   |       |
| <p>d. Is a formal financial plan established for the medium term, i.e. the following 3–5 years?</p> <p>Yes (= 4)<br/>2–3 years (= 2)<br/>1 year only (= 1)<br/>No (= 0)</p>   |       |
| <b>Aggregate score: Legal Entity (a+b+c+d)/4</b>  |       |

## 1.2. Administration and infrastructure

### 1.2.1. Director

Existing information/reporting/monitoring:

- Relevant legislation (i. e. Legal Metrology Act or similar)
- Official Ministerial decisions
- Council decisions and minutes if relevant
- Official CEO job description
- Agreed CEO key performance indicators

Benchmark:

The legal metrology authority is managed by a Director (whatever the actual title) who has the authority to ensure compliance of measuring equipment and pre-packaging in the market falling within the scope of the regulations the legal metrology authority is responsible for.

| Questions  | Score |
|--|-------|
| <p>a. Does the legal metrology authority have a Director dedicated to managing the affairs of the legal metrology authority?</p> <p>Yes (= 4)<br/>           Part of a bigger organization without its own Director (= 2)<br/>           No (= 0)</p>  |       |
| <p>b. Is the Director of the legal metrology authority responsible for the following without undue interference from outside?</p> <ul style="list-style-type: none"> <li>■ Operates as the link between the legal metrology authority and the relevant line Ministry   Yes (= 1)</li> <li>■ Oversees the development, delivery and quality of legal metrology services   Yes (= 1)</li> <li>■ Recommends the annual budget for approval and manages the legal metrology authority resources within the approved budget   Yes (= 1)</li> <li>■ Keeps track of potential and actual problem areas in the market place in relation to the relevant regulations and ensures their speedy resolution   Yes (= 1)</li> </ul> <p>Add scores</p> |       |
| <p><b>Aggregate score: Director (a+b)/2</b></p>  |       |

### 1.2.2. Organizational structure

Existing information/reporting/monitoring:

- Approved organizational structure
- Ministry or Council decisions
- Ministerial decisions
- Financial system documentation

Benchmark:

The organizational structure of the legal metrology authority facilitates the effective and efficient execution of all regulations it is responsible for, and it has divisions that optimally support the legal metrology subject fields.

| Questions  | Score |
|--|-------|
| <p>a. Has the legal metrology authority established divisions in accordance with the legal metrology subject fields such as measuring equipment type approval, market surveillance, and calibration and verification services, maintenance and calibration of inspection equipment?</p> <p>Yes (= 4)<br/>Partially (= 2)<br/>No (= 0)</p>          |       |
| <p>b. Has the legal metrology authority established a presence close to the market place, e.g. provincial or local inspection offices, for optimum market surveillance activities?</p> <p>Yes, throughout the country (= 4)<br/>Partially, some areas still to be established (= 2)<br/>Only the head office is operational (= 1)<br/>No (= 0)</p> |       |
| <p>c. Does the legal metrology authority have appropriately support functions?</p> <ul style="list-style-type: none"> <li>■ Financial services   Yes (= 1)</li> <li>■ Human resource function   Yes (= 1)</li> <li>■ Training function   Yes (= 1)</li> <li>■ Legal function with resident lawyers   Yes (= 1)</li> </ul> <p>Add scores</p>        |       |
| <p><b>Aggregate score: Organizational structure (a+b+c)/3</b></p>  |       |

### 1.2.3. Management and personnel

Existing information/reporting/monitoring:

- Approved organizational structure
- Training records of staff
- Appointment and withdrawal records of legal metrology inspector certificates
- Actual staffing levels
- Staff turnover figures

Benchmark:

Management and personnel with the appropriate skill sets assured by appropriate training, qualifications and experience for the management and technical knowledge as required by the regulation scopes with specific emphasis on legal metrologists, is in place.

| Questions   | Score |
|---|-------|
| <p>a. Are the approved managerial posts filled?</p> <ul style="list-style-type: none"> <li>■ 90–100 %   Yes (= 4)</li> <li>■ 80–89 %   Yes (= 3)</li> <li>■ 70–79 %   Yes (= 2)</li> <li>■ 60–69 %   Yes (= 1)</li> <li>■ &lt; 60 %   Yes (= 0)</li> </ul>  |       |
| <p>b. Are the approved technical posts filled?</p> <ul style="list-style-type: none"> <li>■ 90–100 %   Yes (= 4)</li> <li>■ 80–89 %   Yes (= 3)</li> <li>■ 70–79 %   Yes (= 2)</li> <li>■ 60–69 %   Yes (= 1)</li> <li>■ &lt; 60 %   Yes (= 0)</li> </ul>   |       |
| <p>c. Are the skill sets, responsibilities and key performance indicators (KPIs) of each of the managers in (a) formally defined and applied?</p> <p>Yes (= 4)<br/>           Not for all posts (= 2)<br/>           Skill sets and responsibilities yes, KPIs no (= 1)<br/>           No (= 0)</p>   |       |
| <p>d. Are the skill sets, responsibilities and key performance indicators (KPIs) of each of the technical posts in (b), with specific emphasis on legal metrologists, formally defined and applied?</p> <p>Yes (= 4)<br/>           Not for all posts (= 2)<br/>           Skill sets and responsibilities yes, KPIs no (= 1)<br/>           No (= 0)</p> |       |
| <p><b>Aggregate score: Management and personnel (a+b+c+d)/4</b></p>   |       |

#### 1.2.4. Premises

Existing information/reporting/monitoring:

- Consideration of the legal metrology authority premises in relation to design, environmental controls, access and maintenance
- Review of laboratories and environmental controls
- Review of office space and meeting rooms
- Technical requirements as advised by experts in specific legal metrology fields

Benchmark:

Appropriate accommodation for head office staff and technical activities is provided, as well as appropriate accommodation in provincial or local offices for legal metrologists and their inspection equipment.

**Note: Premises for testing activities are covered in the section on testing.**

| Questions  | Score |
|--|-------|
| <p>a. Is the legal metrology authority head office housed in appropriate premises that allow for acceptable working conditions for employees (light, ventilation, temperature, space available, furniture, etc.)?</p> <p>Yes (= 4)<br/>Needs upgrading (= 1)<br/>No (= 0)</p>  |       |
| <p>b. Are the legal metrology authority provincial or local offices housed in appropriate premises that allow for acceptable working conditions for employees (light, ventilation, temperature, space available, furniture, etc.)?</p> <p>Yes, all of them (= 4)<br/>Yes, but some need upgrading (= 2)<br/>No (= 0)</p>   |       |
| <p>c. Is appropriate space available for the following?</p> <ul style="list-style-type: none"> <li>■ Storage for inspection equipment where it maintains its integrity<br/>Yes (= 2)<br/>Needs upgrading (= 1)<br/>No (= 0)<br/>Add scores</li> <li>■ Storage space for storing product samples for a specific time without deterioration<br/>Yes (= 2)<br/>Needs upgrading (= 1)<br/>No (= 0)<br/>Add scores</li> </ul> |       |
| <b>Aggregate score: Premises (a+b+c)/3</b>   |       |

### 1.2.5. Equipment

Existing information/reporting/monitoring:

- Consideration of the legal metrology fields of activity
- Demonstrable metrology equipment needs of the legal metrology authority
- Review of reference measurement standards
- Review of working standards
- Review of inspection equipment
- Review of maintenance measures for all measuring equipment

Benchmark:

Legal metrology offices are issued with appropriate metrology and inspection equipment. Working standards, traceably calibrated to national measurement standards, are maintained against which working metrology and inspection equipment is calibrated continuously.

**Note: Testing equipment is covered in the section on Testing.**

| Questions   | Score |
|---|-------|
| <p>a. Have the legal metrology offices been issued with all the metrology and inspection equipment as determined by the regulations they are responsible for?</p> <p>Yes, all of it (= 4)<br/>           Mostly, some equipment still missing (= 2)<br/>           Partially, more than half the equipment still missing (= 1)<br/>           No (= 0)</p>  |       |
| <p>b. Are working standards, traceably calibrated to national measurement standards, been established against which metrology and inspection equipment can be calibrated?</p> <p>Yes, in all cases (= 4)<br/>           Mostly, some standards still missing or not traceably calibrated (= 2)<br/>           Partially, more than half the standards still missing or not traceably calibrated (= 1)<br/>           No (= 0)</p> |       |
| <p>c. Is all metrology and inspection equipment continuously calibrated against the working standards?</p> <p>Yes, all of them (= 4)<br/>           Mostly, some equipment lacking (= 2)<br/>           More than half the equipment lacking (= 1)<br/>           No (= 0)</p>  |       |
| <p><b>Aggregate score: Equipment (a+b+c)/3</b></p>  |       |

### 1.2.6. Quality management system

Existing information/reporting/monitoring:

- Consideration of the legal metrology authority's formal quality management system and its compliance with relevant standards such as ISO/IEC 17020 and ISO/IEC 17025

Benchmark:

A quality management system in accordance with ISO/IEC 17020 (Inspection), ISO/IEC 17025 (Test laboratory) and/or ISO/IEC 17065 (Product certification) as relevant, has been implemented and is maintained.

| Questions   | Score |
|---|-------|
| a. Has the legal metrology authority implemented a formal quality management system in accordance with ISO/IEC 17020, ISO/IEC 17025 and/or ISO/IEC 17065 as relevant?<br><br>Yes (= 4)<br>Being implemented (= 1)<br>No (= 0) |       |
| b. Has the quality management system of the legal metrology authority been independently assessed and certified?<br><br>Yes (= 4)<br>Independently assessed, but not certified (= 2)<br>Internally assessed (= 1)<br>No (= 0) |       |
| <b>Aggregate score: Quality management system (a+b)/2</b>   |       |

### 1.3. Service delivery and technical competency

#### 1.3.1. Legal metrology technical staff

Existing information/reporting/monitoring:

- Approved organizational structure
- Formal job descriptions
- Personnel records regarding education, training and experience
- Annual training plans and concomitant records
- Legal metrology inspector training records
- Records of legal metrology inspector cards issued and withdrawn

Benchmark:

Trained and experienced technical staff to conduct the legal metrology testing, calibration and verification has been appointed. Legal metrology staff involved in market surveillance are trained in their legal responsibilities and issued with inspector identification cards.

| Questions   | Score |
|---|-------|
| <p>a. Does the legal metrology authority have the trained and experienced staff to conduct measuring equipment testing, calibration and verification for the types of measuring equipment covered by regulations?</p> <p>Yes, for all equipment (= 4)<br/>           More than half but not all equipment (= 3)<br/>           About half the equipment (= 2)<br/>           Less than half the equipment (= 1)<br/>           No (= 0)</p> |       |
| <p>b. Are the legal metrology inspectors formally trained in respect of their legal rights and responsibilities as detailed in the legal metrology regulations?</p> <p>Yes, with a written examination (= 4)<br/>           Yes, but no written examination (= 2)<br/>           New inspectors learn from older ones (= 1)<br/>           No (= 0)</p>   |       |
| <p>c. Are the legal metrology inspectors issued with an Inspectors Identification Card (whatever its name) that identifies them as inspectors, a card they have to show when in the field inspecting, and which is withdrawn when they leave the legal metrology authority service?</p> <p>Yes (= 4)<br/>           Not officially withdrawn at end of service (= 0)<br/>           No (= 0)</p>  |       |
| <p><b>Aggregate score: Legal metrology technical staff (a+b+c)/3</b></p>  |       |



### 1.3.2. Type approval of measuring instruments

Existing information/reporting/monitoring:

- Formal type approval procedures of the legal metrology authority
- Type approval records of the legal metrology authority

Benchmark:

The legal metrology authority has a formal system in place to test and approve measuring equipment before it is allowed to be marketed to ensure it complies with stated regulations, including the acceptance of OIML and other relevant foreign certificates.

| Questions   | Score |
|---|-------|
| <p>a. Does the legal metrology authority issue a “type approval certificate” (however named) after a measuring device has been tested against technical requirements contained in the relevant regulations, which allows the supplier to market the equipment?</p> <p>Yes, conducts own tests or accepts OIML test reports (= 4)<br/>           Yes, only accepts own testing results (= 2)<br/>           Issues type approval certificates on supplier evidence (= 1)<br/>           No (= 0)</p> |       |
| <p>b. Does the legal metrology authority ensure, e.g. through market surveillance, that only measuring equipment with a type approval certificate are utilised in trade, health services, environmental control and law enforcement where this is a legal metrology requirement?</p> <p>Yes, active market surveillance (= 4)<br/>           Ad hoc market surveillance (= 2)<br/>           Only when complaints are received (= 1)<br/>           No (= 0)</p>                                    |       |
| <p>c. Does the legal metrology authority have a formal system in place to ensure that new measuring equipment is calibrated and verified before placing it into operation?</p> <p>Yes (= 4)<br/>           Rely totally on the supplier to do so (= 2)<br/>           No (= 0)</p>  |       |
| <p><b>Aggregate score: Type approval of measuring instruments (a+b+c)/3</b></p>   |       |

### 1.3.3. Calibration and verification services

Existing information/reporting/monitoring:

- Working plans of the legal metrology authority
- Records of calibrations and verifications
- Records of designated organizations

Benchmark:

The legal metrology authority provides calibration and verification services for equipment subject to regulation, insofar as designated organizations are not in a position to do so.

| Questions  | Score |
|--|-------|
| <p>a. Can the legal metrology authority provide calibration and verification services for all the measuring instruments subject to regulations?</p> <p>Yes, fully (= 4)<br/>           No, but accredited calibration laboratories have been established to do so (= 4)<br/>           Not fully, but more than half (= 3)<br/>           About half (= 2)<br/>           Less than half (= 1)<br/>           No (= 0)</p> |       |
| <p>b. Does the legal metrology authority have the resources, e.g. transport, portable calibration equipment, etc. to provide calibration and verification services in the field?</p> <p>Yes, the important instruments are provided for (= 4)<br/>           Partially (= 2)<br/>           No (= 0)</p>   |       |
| <p>c. Has the legal metrology authority designated other organizations to provide calibration and verification services on its behalf?</p> <p>Yes (= 4)<br/>           In process to implement (= 1)<br/>           No (= 0)</p>   |       |
| <p><b>Aggregate score: Calibration and verification services (a+b+c)/3</b></p>   |       |

### 1.3.4. Market surveillance

Existing information/reporting/monitoring:

- Market surveillance planning documents
- Market surveillance records
- Records of sanctions instituted

Benchmark:

A market surveillance system covering all measuring equipment and pre-packaging subject to regulation for which the legal metrology authority is responsible, is in place.

| Questions   | Score |
|---|-------|
| <p>a. Has the legal metrology authority established a market surveillance system covering all instruments and pre-packaging for which it is responsible?</p> <p>Yes (= 4)<br/>Partially (= 2)<br/>No (= 0)</p>  |       |
| <p>b. Is the market surveillance regime based on a continuous risk assessment of the impact non-conforming measuring equipment or pre-packaging could have and the possibility of it happening?</p> <p>Yes, in all cases (= 4)<br/>Mostly, some not (= 2)<br/>All products are treated the same (= 1)<br/>No (= 0)</p>  |       |
| <p>c. In planning market surveillance, does the legal metrology authority follow the principles of proportionality, i.e. the action taken is in accordance with the level of risk or non-conformity and not more onerous on the economic entity than necessary?</p> <p>Yes, in all cases (= 4)<br/>Mostly, some not (= 2)<br/>All products are treated identical (= 1)<br/>No (= 0)</p> |       |
| <p>d. Does the legal metrology authority plan for scheduled market surveillance as well as off-schedule surveillance based on dealing with a complaint or at the request of a court of law?</p> <p>Yes (= 4)<br/>Off-schedule inspections are squeezed in (= 2)<br/>Inspections are implemented in an ad hoc way (= 1)<br/>No (= 0)</p>   |       |
| <b>Aggregate score: Market surveillance (a+b+c+d)/4</b>   |       |

### 1.3.5. Training system

Existing information/reporting/monitoring:

- Training programmes
- Training records

Benchmark:

Training courses, provided either by the legal metrology authority or a tertiary education institution, for the training of legal metrologists are available.

| Questions  | Score |
|--|-------|
| <p>a. Are formal training courses for legal metrologists, whether provided by the legal metrology authority or by tertiary education institutions, available in the country?</p> <p>Yes, for all technologies (= 4)<br/>           Not all, but more than half (= 2)<br/>           About half (= 1)<br/>           Less than half (= 0)<br/>           No (= 0)</p> |       |
| <p>b. Have all technical staff of the legal metrology authority been through the courses in (a)?</p> <p>100 % (= 4)<br/>           About two-thirds (= 3)<br/>           About half (= 2)<br/>           Less than half (= 1)<br/>           No (= 0)</p>  |       |
| <p><b>Aggregate score: Training system (a+b)/2</b></p>   |       |

## 1.4. External relations and recognition

### 1.4.1. Liaison with regional organizations

Existing information/reporting/monitoring:

- Membership of the legal metrology authority in the OIML liaison organizations
- Reports of participation of the legal metrology authority in the regional organization's activities
- Regional trade agreement membership status of the country
- Relevant regional treaties, protocols, agreements or legislation on legal metrology
- Annual Reports of the legal metrology authority
- Internal reports of regional metrology body meetings

Benchmark:

The legal metrology authority participates actively in regional legal metrology activities its country is part of, including participating in relevant technical committees at the regional level.

| Questions  | Score |
|--|-------|
| <p>a. Is the legal metrology authority a full and active member of the relevant OIML recognized regional liaison organization, e. g. APLMF, COOMET, EMLMF, WELMEC, AFRIMETS, SADC MEL, SIM, etc.?</p> <p>Yes (= 4)<br/>           Ad hoc involvement (= 1)<br/>           A relevant liaison organization does not yet exist (= 0)<br/>           No (= 0)</p>   |       |
| <p>b. Does the NMI participate actively in regional trade agreement related metrology organizations or committees?</p> <p>Continuously in all the relevant ones (= 4)*<br/>           Ad hoc (= 2)<br/>           Only when donor funding is available (= 1)<br/>           No (= 0)</p> <p><small>* NOTE: These regional organizations or committees are usually established to harmonise metrology activities within the region defined by the trade agreement. They are not of necessity the same as the OIML recognized liaison organizations.</small></p> |       |
| <p>c. Does the legal metrology authority participate actively in relevant technical committees of regional legal metrology organizations?</p> <p>Continuously in all the relevant ones (= 4)<br/>           Ad hoc (= 2)<br/>           Only when donor funding is available (= 1)<br/>           No (= 0)</p>   |       |
| <b>Aggregate score: Liaison with regional organizations (a+b+c)/3</b>  |       |

#### 1.4.2. Liaison with international organizations

Existing information/reporting/monitoring:

- Legal Metrology Strategy and its implementation plans
- OIML membership data
- OIML technical committee data
- Annual reports of the legal metrology authority
- Business plans and minutes of the legal metrology authority technical committees
- Formal communication records of the legal metrology authority with the OIML

Benchmark:

The legal metrology authority is a member of the OIML, participates actively in the relevant technical committees and is a signatory of the OIML Certificate System.

| Questions   | Score |
|---|-------|
| a. Is the legal metrology authority a full member of the OIML?<br><br>Yes (= 4)<br>Is a corresponding member (= 2)<br>Has applied for membership (= 1)<br>No (= 0)                        |       |
| b. Does the legal metrology authority participate actively in relevant OIML technical committees?<br><br>Yes (= 4)<br>Participates only in the International Conference (= 1)<br>No (= 0) |       |
| c. Is the legal metrology authority a signatory of the OIML Certificate System?<br><br>Yes (= 4)<br>No (= 0)  |       |
| <b>Aggregate score: Liaison with international organizations (a+b+c)/3</b>  |       |

### 1.4.3. Coordination within the QI

Existing information/reporting/monitoring:

- Line Ministry policies, pronouncements and documentation
- Legal metrology authority annual reports
- Minutes of liaison meetings between the legal metrology authority and the NSB, NMI and NAB
- Technical Regulation Coordination Office mandate and pronouncements

Benchmark:

The legal metrology authority actively cooperates with the NSB, NMI and NAB and where relevant with calibration laboratories and certification bodies, e.g. the legal metrology authority participates in NMI, NSB and NAB technical committees, and an exchange of relevant information takes place continuously regarding standardization, metrology, legal metrology and accreditation needs of the country.

| Questions  | Score |
|--|-------|
| <p>a. Does a formal mechanism exist between the legal metrology authority and the NSB, NMI and the NAB managements as well as their line Ministries where issues can be discussed annually or every six months, and coordination can be fostered?</p> <p>Yes (= 4)<br/>Ad hoc (= 2)<br/>No (= 0)</p> |       |
| <p>b. Does the legal metrology authority provide feedback through the mechanism in (a) on progress in respect of coordination?</p> <p>Yes, always (= 4)<br/>Ad hoc (= 1)<br/>No (= 0)</p>  |       |
| <p>c. Does the legal metrology authority participate actively in relevant technical committees of the NMI, NSB and the NAB and utilises the output thereof in its work?</p> <p>Yes, all three (= 4)<br/>Yes, two of the three (= 2)<br/>One of the three (= 1)<br/>No (= 0)</p>                      |       |
| <b>Aggregate score: Coordination within the QI (a+b+c)/3</b>   |       |

#### 1.4.4. Designated organizations

Existing information/reporting/monitoring:

- Legal metrology legislation and regulations
- Formal procedures for designating institutes
- Official documentation of designated organizations
- Work programme of the legal metrology authority
- Annual Reports of the legal metrology authority

Benchmark:

The legal metrology authority designates competent organizations to provide legal metrology related services on its behalf.

| Questions   | Score |
|---|-------|
| <p>a. Does the legal metrology legislation mandate the legal metrology authority to designate others, whether public or private sector organisations, to provide legal metrology services on its behalf?</p> <p>Yes (= 4)<br/>No, but it is done anyway (= 2)<br/>No, and it is not done (= 0)</p>  |       |
| <p>b. Does the legal metrology authority utilise accreditation to ISO/IEC 17020 or ISO/IEC 17025 as appropriate together with the legal liability aspects at national level of the to be designated organization, as criteria for its designation?</p> <p>Yes (= 4)<br/>Accreditation not always (= 2)<br/>No (= 0)</p>                     |       |
| <p>c. Does the legal metrology authority have a formal system in place to determine whether designated organizations continuously meet their designation requirements, and withdraws it when not?</p> <p>Yes, at least annually (= 4)<br/>Ad hoc when complaints are received (= 2)<br/>No, relies on the accreditation body only (= 0)</p> |       |
| <p><b>Aggregate score: Designated organizations (a+b+c)/3</b></p>   |       |



### 1.4.5. Consultative forum

Existing information/reporting/monitoring:

- Legal Metrology Strategy and its implementation
- Communication strategy/plan and its implementation
- Minutes of consultative forum meetings
- Key performance indicators of senior management
- Stakeholder mapping results

Benchmark:

Stakeholders such as the suppliers of measuring instruments, retail organizations and consumer organizations can participate in a consultative forum to provide advice to the legal metrology authority as regards their needs.

| Questions  | Score |
|--|-------|
| <p>a. Has the government established a consultative forum, i.e. Legal Metrology Forum or similar, or similar where all stakeholders of the QI can provide input and raise issues regarding the legal metrology needs of the country?</p> <p>Yes (= 4)<br/>Ad hoc (= 1)<br/>No (= 0)</p>      |       |
| <p>b. Does this consultative forum meet regularly, e.g. at least once or twice annually?</p> <p>Yes (= 4)<br/>Ad hoc meetings only (= 1)<br/>No (= 0)</p>  |       |
| <p>c. Does the legal metrology authority formally consider the recommendations of the Consultative Forum, and provides feedback on progress in this respect?</p> <p>Yes, always (= 4)<br/>Fifty percent of the time (= 3)<br/>Considers them but provides no feedback (= 1)<br/>No (= 0)</p> |       |
| <b>Aggregate score: Consultative Forum (a+b+c)/3</b>   |       |





# Imprint

**Published by**

Physikalisch-Technische Bundesanstalt  
Bundesallee 100  
38116 Braunschweig  
Germany

**Responsible**

Dr. Marion Stoldt  
+49 531 592-9300  
marion.stoldt@ptb.de  
www.ptb.de/9.3/en

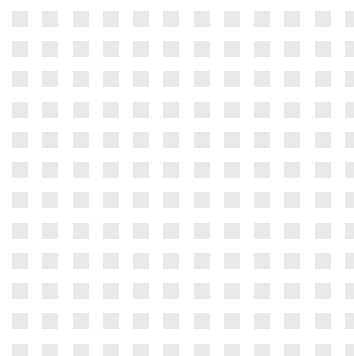
**Text**

Martin Kellermann

**Title image**

Getty Images/iStockphoto

As of October 2018







## Contact

Physikalisch-Technische Bundesanstalt  
International Cooperation  
Dr. Marion Stoldt  
Phone +49 531 592-9300  
Fax +49 531 592-8225  
[marion.stoldt@ptb.de](mailto:marion.stoldt@ptb.de)  
[www.ptb.de/9.3/en](http://www.ptb.de/9.3/en)

[worldbank.org/qi](http://worldbank.org/qi)  
[ptb.de/qitoolkit](http://ptb.de/qitoolkit)