



REPUBLIC OF SERBIA  
Ministry of economy



DIRECTORATE OF MEASURES AND PRECIOUS METALS



# **Strategic management in the environment of frequent changes and difficult economic conditions**

## **Restructuring of the NMI services by outsourcing DMDM experience**

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Directorate of Measures and Precious Metals

**Training and Workshop**  
**Principle of Strategic Management**  
**Belgrade 4/5 December 2014**

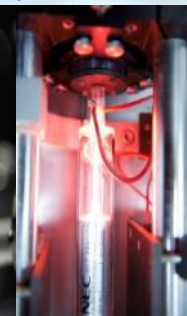
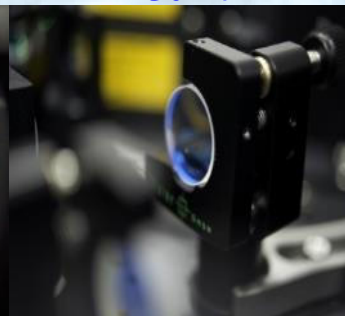
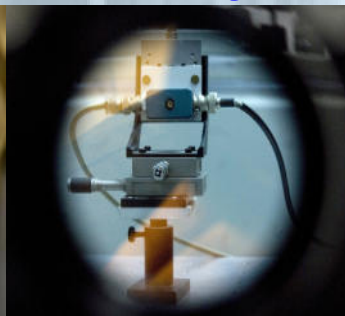


**Focus Group on**  
Facilitating National Metrology Infrastructure Development



## DMDM - General information

- ▶ Key institution for metrology in Serbia is **Directorate of Measures and Precious Metals (DMDM)**
- ▶ DMDM is a member and actively participate in:
  - ✓ European Association of National Metrology Institutes (**EURAMET**), 2005 and
  - ✓ European metrology program for innovation and research (**EMPIR**), 2014
  - ✓ European Cooperation in Legal Metrology (**WELMEC**), 2008
  - ✓ European Association for Chemical Measurements (**EURACHEM**), 2012
- ▶ **Serbia** is Member State of:
  - ✓ **Metre Convention (BIPM)** (Principality of Serbia, 1879) and DMDM participates in **CIPM MRA** (signed 2002)
  - ✓ **International Organization of Legal Metrology (OIML)**, 1955





## Metrology infrastructure in Serbia

- Metrology system in the Republic of Serbia has been established in accordance with international and EU trends, and it consists of the following subjects:
  - The Ministry responsible for metrology activities (Ministry of Economy)
  - Directorate of Measures and Precious Metals (DMDM)
  - Designated Institutes (DI)
  - Metrology Council
  - Designated conformity assessment bodies
  - Authorised bodies for measuring instruments verification
  - Accredited calibration laboratories



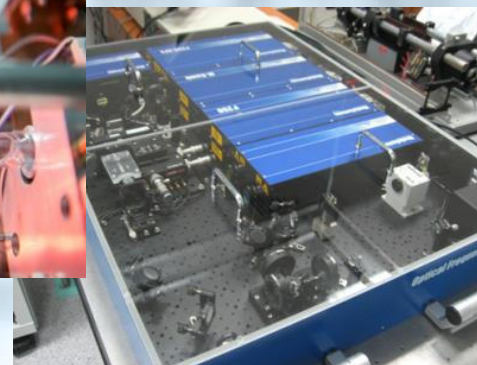
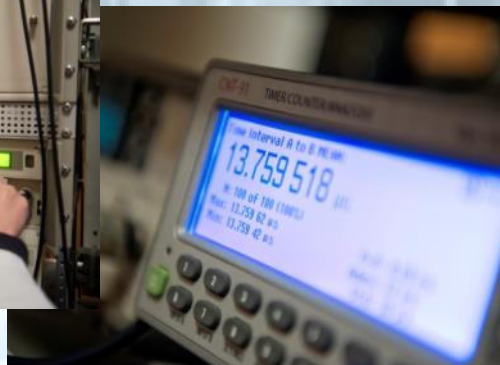


- Ministry of Economy performs activities related to **legislative activities and policy of development of metrology**
- DMDM is governmental authority responsible for **industrial/scientific and legal metrology** and acts as the **National Metrology Institute of Serbia (NMI)**
- Metrology Council is the specialised **advisory body** comprising distinguished experts and stakeholders representatives, it proposes scientific and training activities in the field of metrology and defines priorities in scientific and research-development projects in the field of metrology
- Designated conformity assessment bodies are economic and other legal entities responsible for **conformity assessment of measuring instruments**
- Authorised bodies are economic and other legal entities responsible for **verification of measuring instruments** in legal metrology



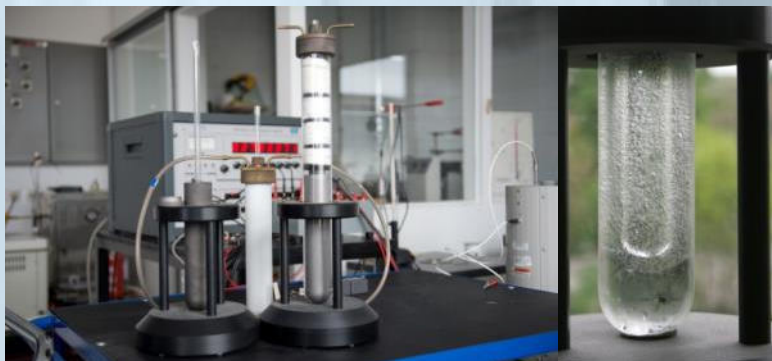
## DMDM Responsibilities Industrial/Scientific Metrology

- DMDM, as NMI, holds most national measurement standards of Serbia (VINS, as DI, holds national measurement standard for Ionizing radiation)
- Participates in CIPM MPA, through EURAMT evaluates and publishes calibration and measurement capabilities (CMC) in BIPM database (BIPM KCDB) and ensures traceability to international standards of SI units for all customers in the Serbia





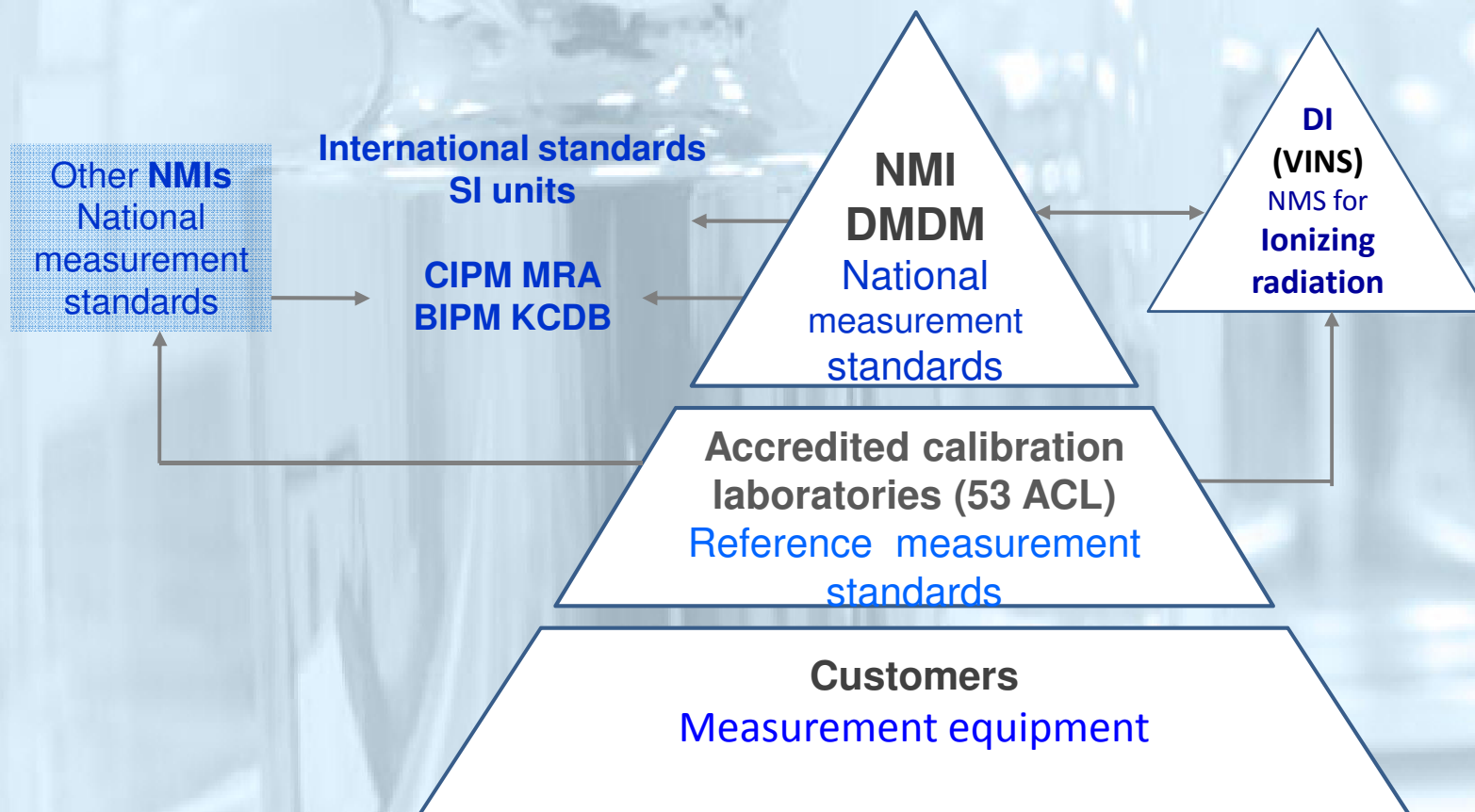
- The CMCs published in BIPM KCDB and recognized through the CIPM MRA: [Temperature](#), [DC voltage, current, and resistance](#), [AC voltage, current, and power](#), [High voltage and current](#), [Fluid flow](#), [Sound in air](#), [Mass, mass standards](#), [Dimensional metrology](#), [Photometry](#), [Time interval](#), [Frequency](#), [Properties of materials](#)







# Traceability





## DMDM Responsibilities-Legal Metrology

- DMDM activities in legal metrology:
  - » conformity assessment of the measuring instruments
  - » type examination and type approval
  - » verification of measuring instruments for which the authorised bodies do not exist
  - » metrology supervision and market surveillance of measuring instruments and pre-packed products
  - » testing of pre-packed products and measuring bottles







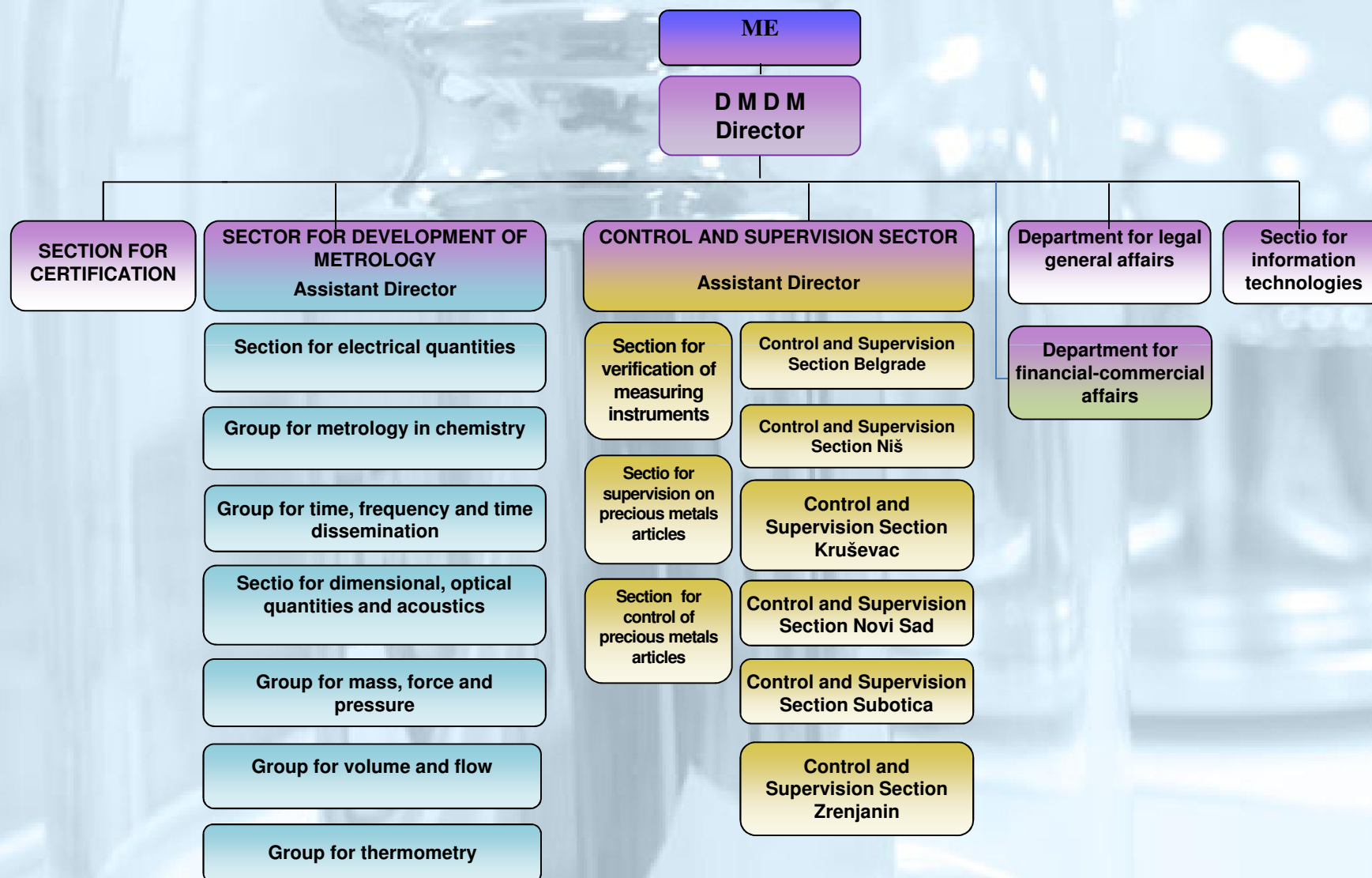
DMDM: total number of employees 116,  
104 permanently and 12 under contract

DMDM is funded from the

- **budget** of Republic of Serbia
- **other sources** in accordance with the Law (donation, beneficiary projects IPA, GIZ,....)
- **incomes from DMDM services** are the revenue of the budget of Republic of Serbia



# Organization Structure DMDM





## Strategic management - Introduction

### 1. **Strategic management is essential for NMIs:**

- developments in metrology take much time
- investment costs are usually high
- financial and human resources are limited

In particular when

- **difficult economic conditions and frequent changes exist** (economic crisis)

#### Problem:

It is difficult to predict trends or prescribe courses of action with a high degree of confidence in their likely success





## How the strategic planning and management help during the economic crisis?

Key finding of surveys and investigations show:

*“that organizations that used strategic planning and management were better prepared, more confident, and better able to pursue improvement opportunities in difficult economic conditions”*

### Solution:

Some services and activities decline or terminate, new innovative ideas become the driving forces and play important role in leading out of recession.



# From vision and mission to goals – DMDM Example

## Vision Statement

DMDM to be distinguished, leading and internationally recognized national metrology institution in the region that provides all necessary metrological services in Serbia, and participates in the development and innovation projects in all fields of measurement that improve social life, economy and sustainable development.

## Mission Statement

DMDM mission, as the leading metrology institution in Serbia, is to develop and ensure the implementation of appropriate measurement infrastructure that provides accurate, reliable and trustworthy measurements whose purpose is to contribute to the prosperity, improve the quality of life of citizens and increasing the competitiveness of the economy

# Strategic Goals (Priorities) for the period (2014-2020)

## NMI activities

- To cover the metrological needs of all interested parties in Serbia by improving the characteristics of existing and development of new national measurement standards
- To close traceability gaps in the entire metrological system by establishing and supervising Designated Institutes (DIs) as national measurement standard holders in some specific areas of measurement
- To improve research capacities as well as calibration and measurement capabilities (CMCs) by active participation in European metrology research programs
- To ensure traceability for all interested stakeholders by dissemination of the SI units





## Strategic Goals (Priorities) for the period (2014-2020)

### Legal metrology activities

- To fully harmonize Serbian legislation in metrology with EU legislation and practice
- To support Serbian manufacturers of measuring instruments in having access to the European market by developing DMDM as Designated (Notified) Body for conformity assessment
- To improve consumer protection by implementing adequate Market surveillance for measuring instruments and control of Pre-packaged products according to European principles



Strategic Goal:

**To cover the metrological needs of all interested parties in Serbia by improving the characteristics of existing and development of new national measurement standards**

### **The current situation**

DMDM has established national measurement standards for a variety of fields, such as mass, electricity, length, volume, time and frequency, photometry and temperature. ...

### **Corresponding actions**

DMDM will continue to improve and extent the ranges of the existing national metrology standards, e. g. for temperature, DC voltage and laser frequency. ...



# Strategy implementation:

## Problems:

Provision of national funds is not sufficient for full operation and envisaged enlargement of activities (frequent revisions of the budget and its continual reduction)

Stability of staff/experts and very high average age rate (some experts left institution due to different reasons such as retirement, better offer from other employers etc.)

So at the moment there are 22 vacancies without possibility for new employments (Government Decree).

Frequent changes of the minister in charge for metrology (a lot of time spent to explain them the importance and needs of metrology)

Goal  
setting

Strategy  
formulation

Strategy  
Implemen-  
tation

Strategy  
monitoring





# Strategy implementation:

## Solutions and Corresponding actions

Sharing of facilities

(Sharing some specific equipment and human resources with some scientific institution and laboratories in Serbia)

Contracts of cooperation

Outsourcing

Verification: Authorised bodies for verification of measuring instruments in legal metrology, 75 AB

Conformity assessment: Designated conformity assessment bodies responsible for conformity assessment of MIs

Subcontracting

Testing of MIs (EMC tests, mechanical disturbances tests etc.)

Goal  
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Implemen-  
tation

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monitoring



# Strategy implementation:

## Financial support

Beneficiary projects

Participation in the EMPIR

## Human resources

New organization structure and divert of staff

Working Groups with specific tasks

Goal  
setting

Strategy  
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**Thank you for your attention**

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