



Welcome to Cambodia National Metrology Center (NMC)

Presented by
Ms. PEOU Vorleaks, President



NATIONAL METROLOGY CENTER

- NMC is under supervision Ministry of Industry & Handicraft, and founded on 22nd April 2011.
- NMC manages three main areas of metrology such as :
 - A. Scientific Metrology**
 - B. Industrial Metrology**
 - C. Legal Metrology**
- All metrological works of NMC are stipulated by the Metrology law of Cambodia and shall cover the implementation of manufacturing, importation, installation, use, repairs, maintenance and the exposure for sale of metrology instruments, product goods, pre-packaged goods within the Kingdom of Cambodia.



Structure of National Metrology Center





3. Vision

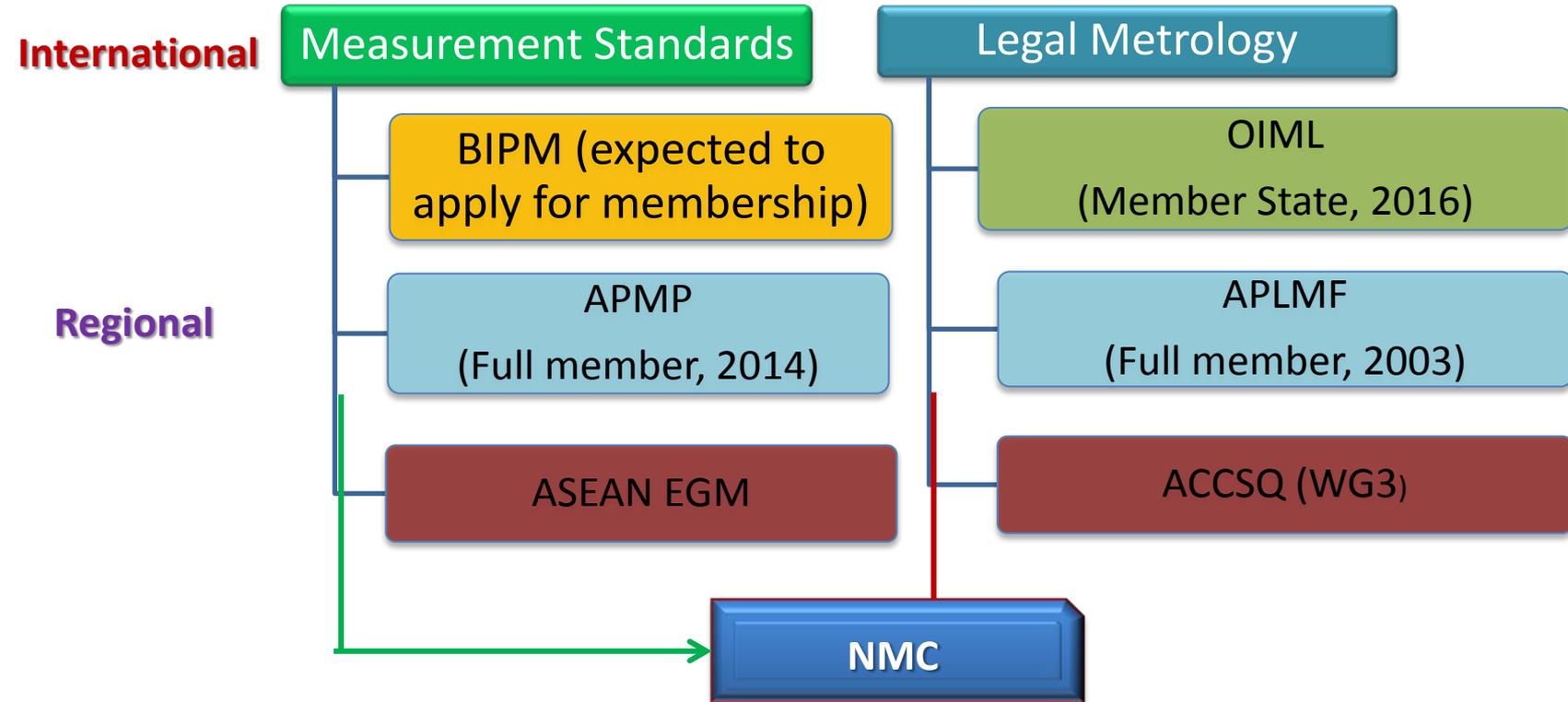
- To improve metrology to be a core component in the development of industry, services, science, and technology and to form the basis of economic growth.

4. Mission

- To promote Cambodian innovation and industrial competitiveness by advancing measurement science, standards and technology in ways that enhance economic security and improve our quality of life.
- To enhance the accurate measurements in industry in accordance with an internationally recognized measurement infrastructure.



International Engagement or Membership



NMC is actively engaged in participating in all activities of both metrology organizations (Scientific and legal metrology) at the regional and international level.

Key Activities



- **Public consultation:** NMC provides consultation to industry in order to assist in the implementation of metrological related tools to improve their productivity and product or handling of specific measurement systems. Consulting services are also available for verification, calibration laboratories. For instance, in the period of 27 to 29 June, 2017, NMC with support of PTB provided consultation to private sectors both SMEs and secondary laboratories in term of technical support for increasing productivities and enhancing competitiveness.
- **Training course:** 27th June 2017, PTB experts selected SMEs representatives participated in a half day workshop which focused on basic QI concepts and gathering data on quality issues and QI services.
- 29th June 2017, PTB experts and NMC organized another workshop with NQI institutions, regulators and high ranking government officials for concluding what they have found from the private sectors.

Key Activities



- **Training course on metrology technology in national economic priority for Cambodia will be held from 30 October to 26 November 2017.**
- APEC training workshop on Solar Cell and LED Measurement Standard and Technology from 28 to 30 March 2017 in China
- Joint APMP + APLMF workshop/MEDEA Validation Workshop from 22 to 25 May 2017 in Malaysia
- Verification of Taxi Meter and Water Meter from 03 to 12 July 2017 in China
- MEDEA course on Verification of Rice Moisture Meters from 17 to 21 July 2017 in Malaysia
- MEDEA course on Verification of Bulk Flow Metering Systems using a Master Meter from 24 to 27 July 2017 in Thailand
- Sakura Exchange Program in Science from 27 August to 03 September 2017 in Japan
- MEDEA course on Verification of Weighbridges from 26 to 29 September 2017 in Beijing, People's Republic of China
- APEC workshop on Capacity Building of Measurement Standards and Technologies in Grain Food Safety from 12 to 13 October 2017 in Beijing, People's Republic of China

Key Activities of Training

- Measurement competence is increased by delivering training programs in: calibration, measurement uncertainty, analytical method of validation; and verification test procedures.



- Measurement plays a critical part of all societies and effective trade needs transparency and a balance of information and trust between traders and consumers. NMC has published the metrology law of Cambodia and established many necessary technical regulations which complies with international requirement for filling the missing gaps, and driving the policy. The activities that NMC has done to support trade such as: **fuel dispensers** at petrol stations are of an approved type and verified to make sure they deliver the correct amount of fuel to consumers, weighing scale at market, and airport.

Consumer protection



7. Awareness raising and the contribution of metrology to SMEs

Stakeholder understanding

- quarterly meeting
- Consultancy support
- Industry and factory inspection
- Workshop
- Seminar
- Training course
- Public forum
- Publication through webpage, media, banner, booklet

Private sector/ government agencies

- Manufacturer expectation
- Institutional support
- Satisfaction responds to our services
- Create Credible environment on the use of metrological equipment in trade transaction and industry

Contribution of metrology to SMEs

Regulated areas

មជ្ឈមណ្ឌលជាតិមេត្រូឡូជី (ម.ម.ជ)
NATIONAL METROLOGY CENTER (NMC)



អគារជំនួញគុណភាពសម្ភារៈ និងការវិនិច្ឆ័យសម្ភារៈសាមញ្ញ

មេត្រូឡូឡូជី គឺជាវិទ្យាសាស្ត្រនៃការវាស់វែង។ របៀប និងបច្ចេកទេសត្រូវយល់តាមគោលការណ៍របស់អង្គការនិក្ខុនកុលអន្តរជាតិ ដើម្បីឱ្យមានភាពចុះស្របគ្នា និងសេចក្តីត្រូវការនៃភាពសុក្រឹត។

- គោលបំណងនៃច្បាប់មេត្រូឡូឡូជី**
- ធានាឱ្យការធ្វើការវិនិច្ឆ័យមានភាពយុត្តិធម៌ និងត្រឹមត្រូវ
 - ធានាផលប្រយោជន៍ដល់អ្នកផ្គត់ផ្គង់ និងអ្នកប្រើប្រាស់ ផលិតផលនិយម និងសេវាកម្ម
 - ធានាធ្វើឱ្យការត្រួតពិនិត្យគុណភាពទំនិញ ផលិតផល សេវាកម្ម និងប្រក្រតី
 - បង្កើតការប្រើប្រាស់ឧបករណ៍មេត្រូឡូឡូជីមានភាពត្រឹមត្រូវសុទ្ធជាង
 - កំណត់អត្តសញ្ញាណ និងភាពប្រក្រតីរបស់ឧបករណ៍មេត្រូឡូឡូជី ធ្វើឱ្យមានភាពចុះស្របគ្នារវាងការវិនិច្ឆ័យ លើផ្ទៃនីក្ខុនកុលមេត្រូឡូឡូជី
 - ធ្វើឱ្យមានជំនឿ និងទំនុកចិត្តលើការប្រើប្រាស់ឧបករណ៍មេត្រូឡូឡូជីគុណភាពពាណិជ្ជកម្ម និងវិស័យផ្សេងទៀតដើម្បីសុខភាព សុវត្ថិភាព និងបរិស្ថាន
 - សម្រួលការងារវិនិច្ឆ័យសម្ភារៈសម្រាប់ឧបករណ៍ ដើម្បីកាត់បន្ថយតម្លៃនៃសេដ្ឋកិច្ច។



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Steps to a Global Measurement System



One-stop Testing

- **Harmonization**

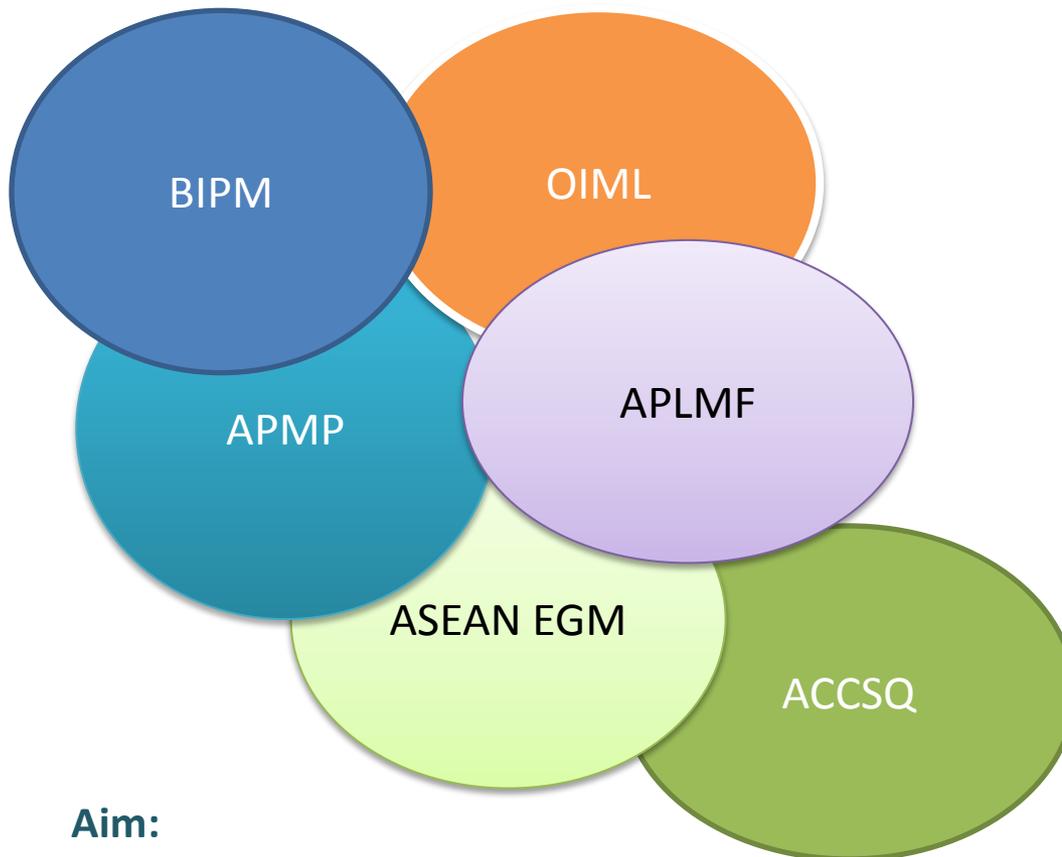
1. Physical units (SI)
2. Legislation
3. Product standards
4. Calibration and test procedures
5. Conformity assessment

- **Mutual confidence**

1. Laboratory inter-comparison
2. Quality system
3. Accreditation or self-declaration
4. Mutual recognition agreements

World-wide acceptance of Certificate

- *Regional and International organization*



Aim:

- **Mutual Recognition of Metrological Results**

Bilateral Cooperation



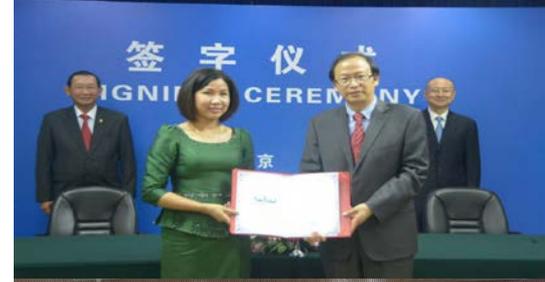
1. PTB: Cooperation on Strengthening NQI.

This cooperation will sign very soon.

2. **AQSIQ** : Cooperation on Metrology, which was signed by Minister of Industry and Handicraft and Minister of General Administration of Quality, Supervision and Quarantine (AQSIQ)

3. **NIM, China**: Cooperation on Metrology, which was signed by President of NMC and Director General of NIM, China

4. **GXQTS**: Cooperation on Metrology, which was signed by President of NMC and Director General of GXQTS



Future plans and potential impact



- Engage more in training, calibrating & consultancy process
- Gather information to evaluate & compare results
- Seek expert opinion where necessary
- To strengthen the capacity of the National Metrology Centre in doing research and in preparing procedures for inspection, verification, calibration, and testing
- To raise awareness of the importance of metrology in order to broaden and attract the interest of entrepreneurs
- To organize public forums and dialogues with private sectors on the public services of metrology;
- To do survey on the market demands, and determine the identification of metrological equipment which prioritized for developing industry.
- To Support and improve the capacity and competency in metrology assurance with regard to quantity, quality, safety, service, environment and management.
- To take practical actions to strengthen the implementation of metrology as a tool for promoting completeness;

- NMC technicians have limited skills in calibration, testing, pattern approval, and verification.
- Lack of facilities (reference standard) to conduct the testing, calibration and verification.
- Lack of technical assistance (Experts)
- Limited budget for development.
- Lack of National Primary, Secondary and Working standards
- Lack of budget to procure the requirement standards,

Thank you!

Q & A

