

Outline

◆ 01 – Global Quality Infrastructure – recent developments.

◆ 02 – Metrology in QI. Role of the BIPM and the recent SI revision.

Quality infrastructure – new definition agreed

“The system ..

comprising the organizations (public and private) together with the policies, relevant legal and regulatory framework, and practices

needed to support and enhance the quality, safety and environmental soundness of goods, services and processes.

it relies on

- *metrology*
- *standardization*
- *accreditation*
- *conformity assessment, and*
- *market surveillance” (in regulated areas)”*

“The quality infrastructure is required for the effective operation of domestic markets, and its international recognition is important to enable access to foreign markets.

It is a critical element in promoting and sustaining economic development, as well as environmental and social wellbeing.”

adopted in June 2017 by the DCMAS Network
BIPM, IAF, IEC, ILAC, ISO, ITC, ITU, OIML, UNECE and UNIDO + the World Bank.

Recent changes in 'QI' world

- DCMAS Network is being renamed to **INetQI – International Network on Quality Infrastructure**



Launched November 2018

and renewed its commitment to promote quality and enhance cooperation in promoting the understanding, value and acceptance of the quality infrastructure as well as providing guidance and support for its effective implementation and integration worldwide in responding to the challenges of globalization, trade and sustainable development.

The following **12 international organizations are part of INetQI:**
BIPM, OIML, ILAC, IAF, ISO, IEC, ITU, ITC, UNIDO, UNECE, WBG and WTO

National Quality Infrastructure

Quality infrastructure – new definition agreed



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BIPM, IAF, IEC, IAC, ISO, ITC, ITU, DIN, UNECE and UNIDO + the World Bank.

“The NQI are the national institutions that provide the framework and services to advance the quality and safety of products and services offered in local and foreign markets.”

IAAC at the WTO

And internationally the QI is the sum of the NQI + the transnational institutions and systems that effectively link them

National Quality Infrastructure in practice

Regulated

Unregulated (Market)


Standardization
Provides standards

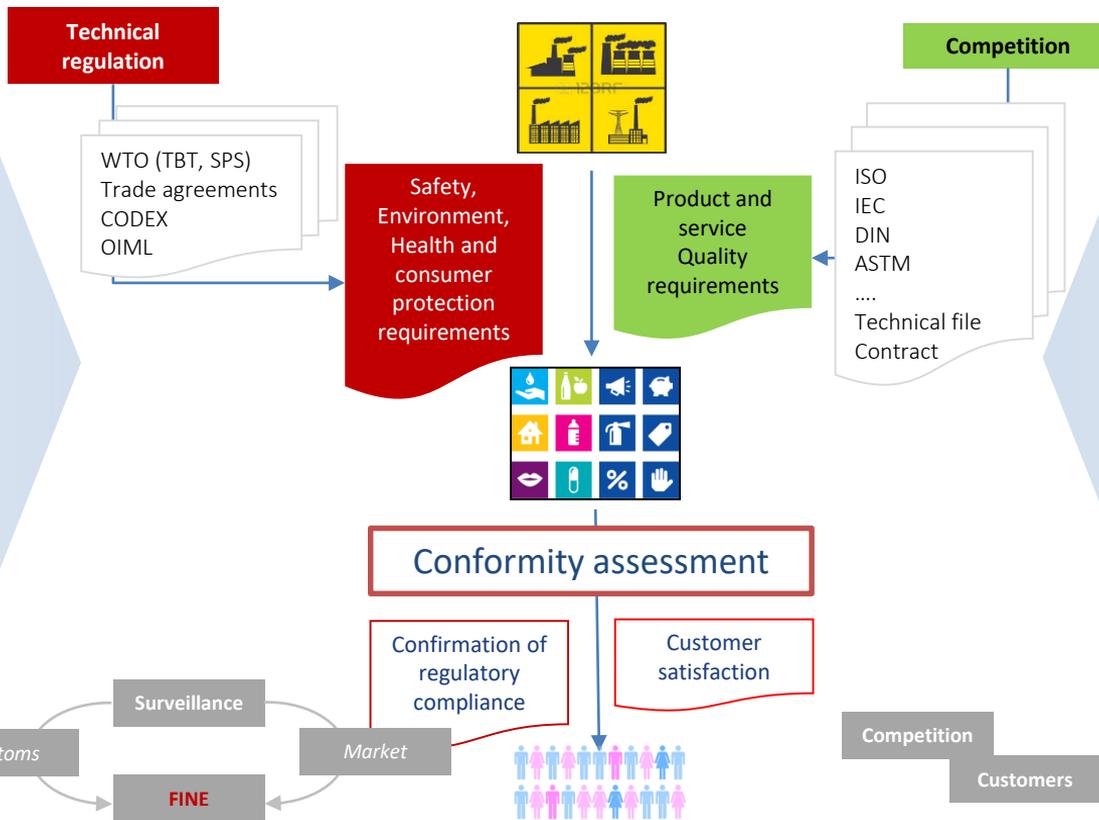

Metrology
Calibration, verification & measurement services


Accreditation
Certification & testing services


Standardization
Provides standards


Metrology
Calibration & measurement services


Accreditation
Certification & testing services



World Metrology Day 2019

World Metrology Day

π
BIPM
BUREAU INTERNATIONAL DES
POIDS ET MESURES

Standards and
Calibration
Laboratory, Hong Kong, China

kg
m
s
A
K
mol
cd

**The International
System of Units**
Fundamentally better

Bureau
International des
Poids et
Mesures

OIML

SI

20 May 2019
www.worldmetrologyday.org

www.bipm.org

World Standards Day 2019

**World
Standards Day
2019**

14 October 2019

*Video standards
create a global stage*

IEC ISO ITU

World Accreditation Day 2019

ilac IAF

**Accreditation:
Adding Value to Supply Chains**

World Accreditation Day
9 June 2019
(#WAD2019)

UNIDO-BIPM-OIML Joint brochure



UNIDO-IEC-ISO-ITU Joint Brochure



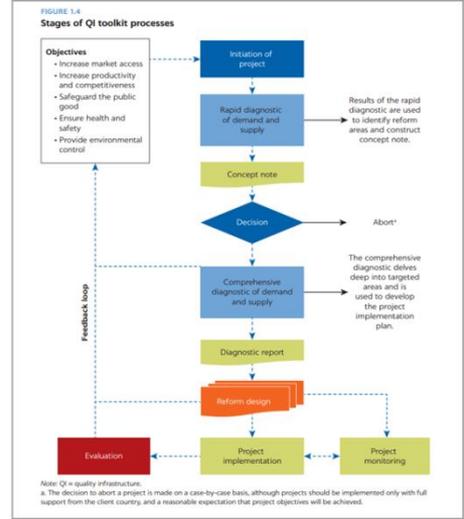
UNIDO-IAF-ILAC Joint Brochure



Recent publications of INetQI members

WBG and PTB 'A Reform Toolkit'

UNIDO 'Quality Policy - Guiding Principles'

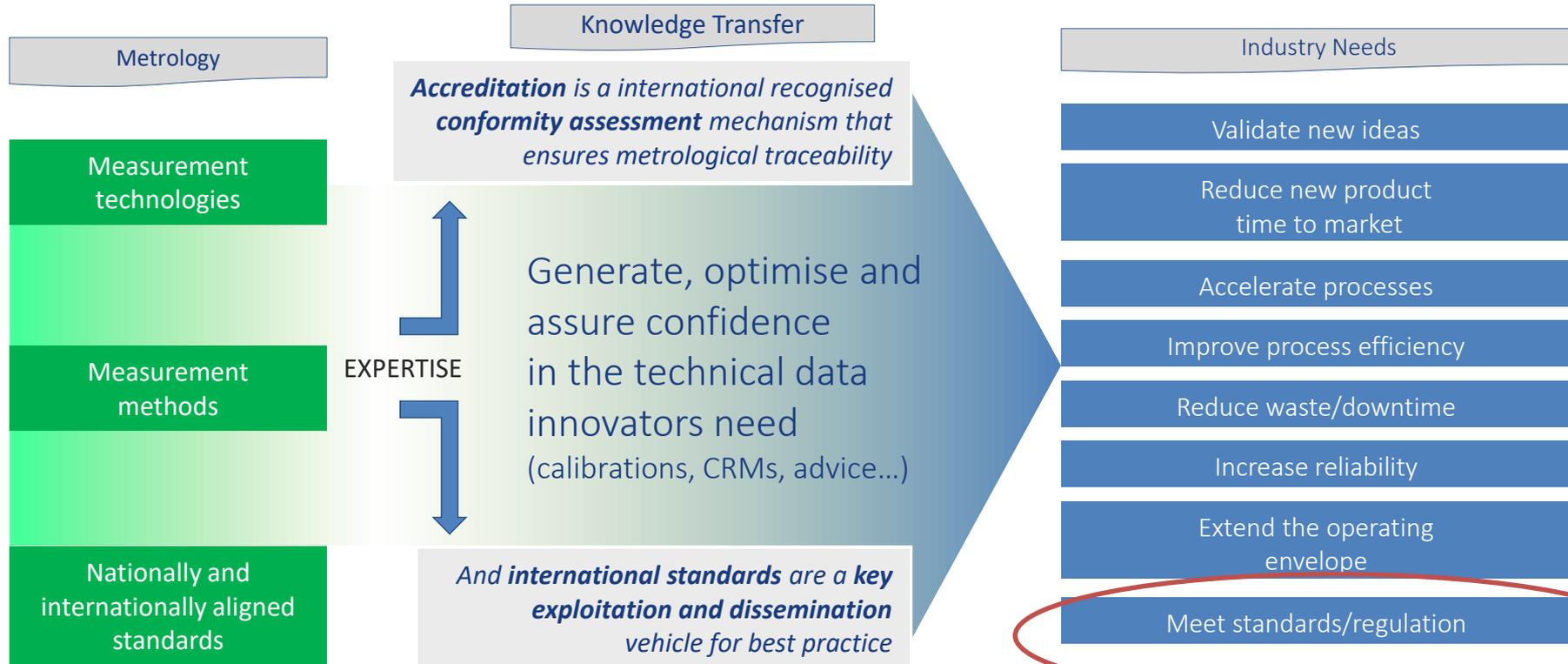


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Benefits of metrology within QI



The work of the BIPM

The BIPM is the intergovernmental organization through which Member States act together on matters related to measurement science and measurement standards.

71 staff from 18 countries



3 international databases



5 Departments



10 Consultative Committees



4 Joint Committees



19 CBKT projects



Seven base units



Approved by Resolution 1 of the 26th CGPM (2018)

Implementation date was 20 May 2019

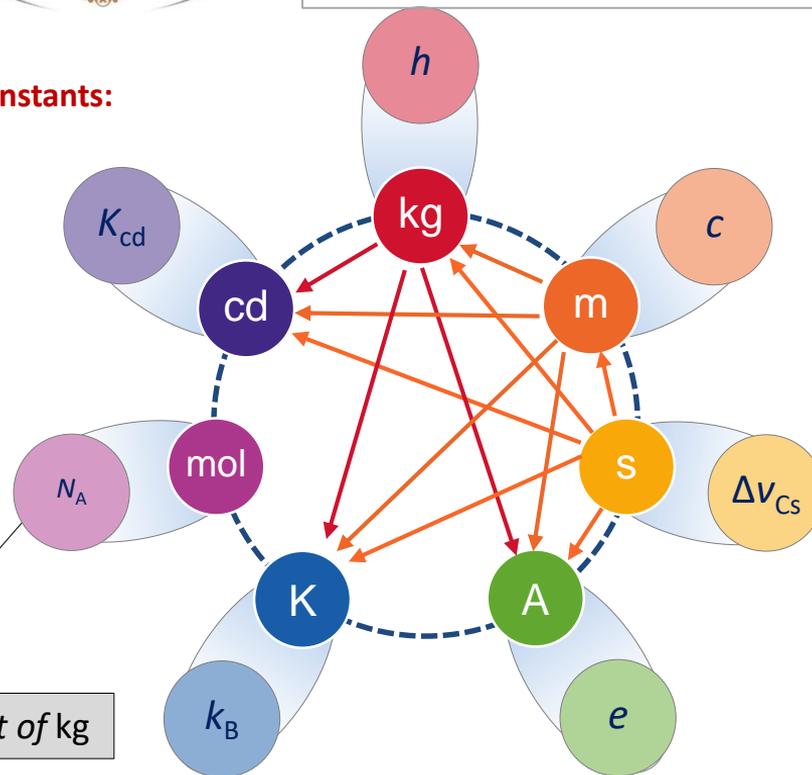
6 definitions based on **fundamental (or conventional) constants**:

- metre (c)
- candela (K_{cd})
- kilogram (h)
- ampere (e)
- kelvin (k_B)
- mole (N_A)

1 definition based on **atomic property**:

- second ($\Delta\nu_{Cs}$)

mol is now independent of kg



Conclusions

- ◆ The world economy, society and citizens depend on the international “quality infrastructure” – metrology, standards and accreditation, particularly when underpinning conformity assessment activities.
- ◆ The value of metrology isn’t easy for the everyday person to understand.....
- ◆ The BIPM is the intergovernmental organization through which Member States act together on matters related to measurement science and measurement standards.
- ◆ Revision of the SI ensures that role of metrology remained reliable at science and advanced technology.

