

The Role of National Quality Infrastructure in Promoting Risk-Based Solutions

Dr. Monideep Dey



Consultation on public policy, regulation and standardization

“Risk-Based Consumer Protection Workshop”

June 25, 2018

Accra, Ghana

Outline

- Introduction
- National Quality Infrastructure
- US principles and practices in NQI
- Use of NQI for risk-based consumer protection, and to promote trade
- Ongoing efforts for improving quality infrastructure
 - UNIDO, World Bank Group, ISO, Standards Alliance
- Conclusions and recommendations

Presented at the "Risk-Based Consumer
Protection Workshop" June 25, 2018
Accra, GHANA

Background

- Deytec, Inc. is a consulting company and active member of ANSI (AIF, AIC, IPC)
- Nuclear engineering/nuclear safety
- Development of US public policy and safety regulations
- Fire safety of nuclear installations/fire safety engineering
- Public safety risk assessment/engineering analytical methods

Presented at the "Risk-Based Consumer
Protection Workshop" June 25, 2018
Accra, GHANA

Expert in ISO Standardization System

- Convenor in *TC 92 SC 4 - Fire safety engineering* (5 yrs.)
- Focus on inclusion of conformity assessment
- Member ANSI-ICAC (mirror committee to ISO CASCO)
- ISO Convenors training and workshops – ISO mission
- ISO, IEC, WTO conferences and training – Policy, TBT
- Participation in DEVCO (ANSI), ISO General Assembly
- **Business focus on developing economies: trade and competitiveness**

Presented at the "Risk-Based Consumer
Protection Workshop" June 25, 2018
Accra, GHANA

Standards for a better world



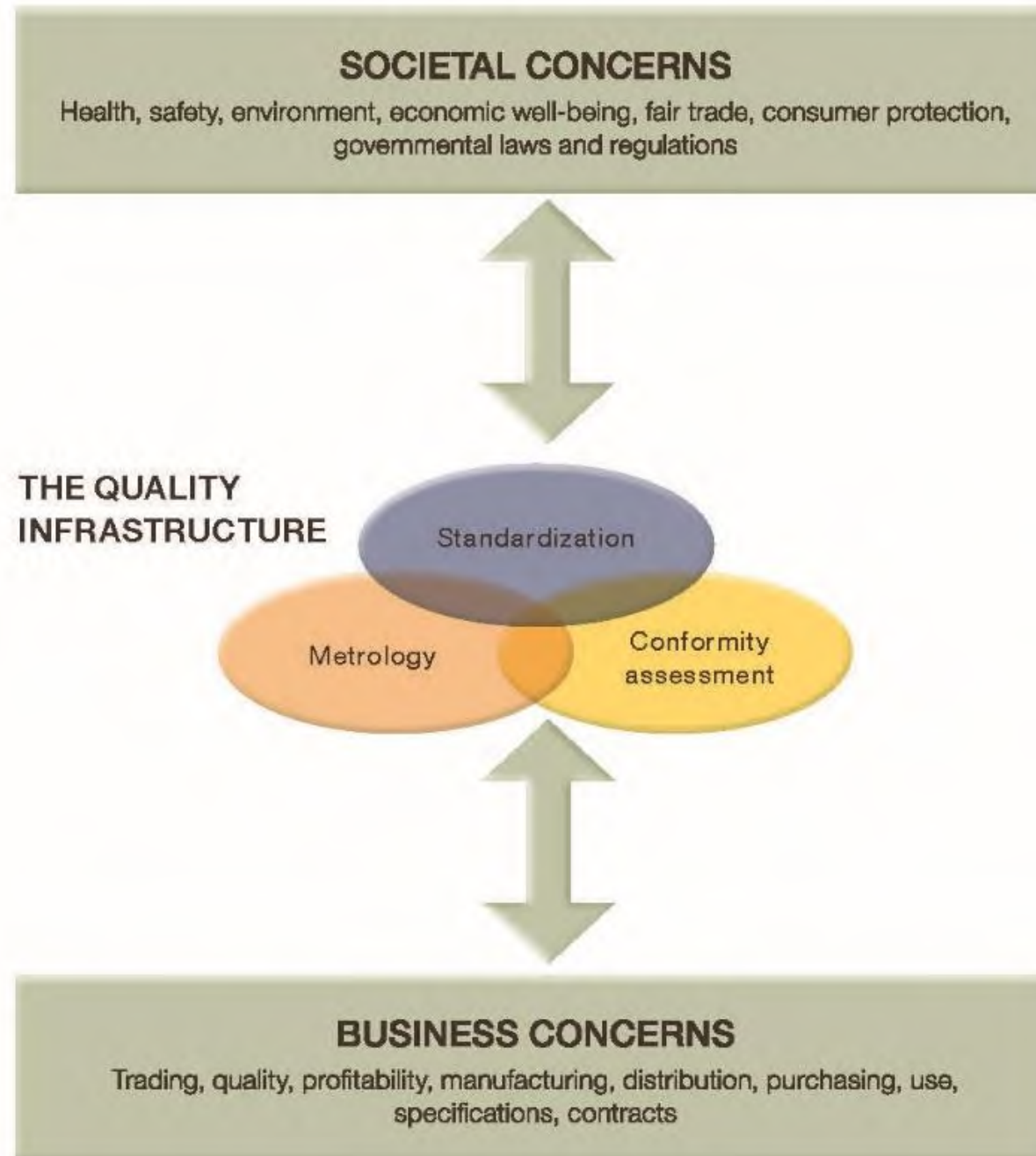
For more about ISO's work programme as it affects consumers, see the ISO Directory for consumer interest participation: www.iso.org/COPOLCO_interest
 *In collaboration with IEC.

Illustration: Vera Kozlovskaya

ISO 26000: 2010

Prepared by Alexey Sidorov

17

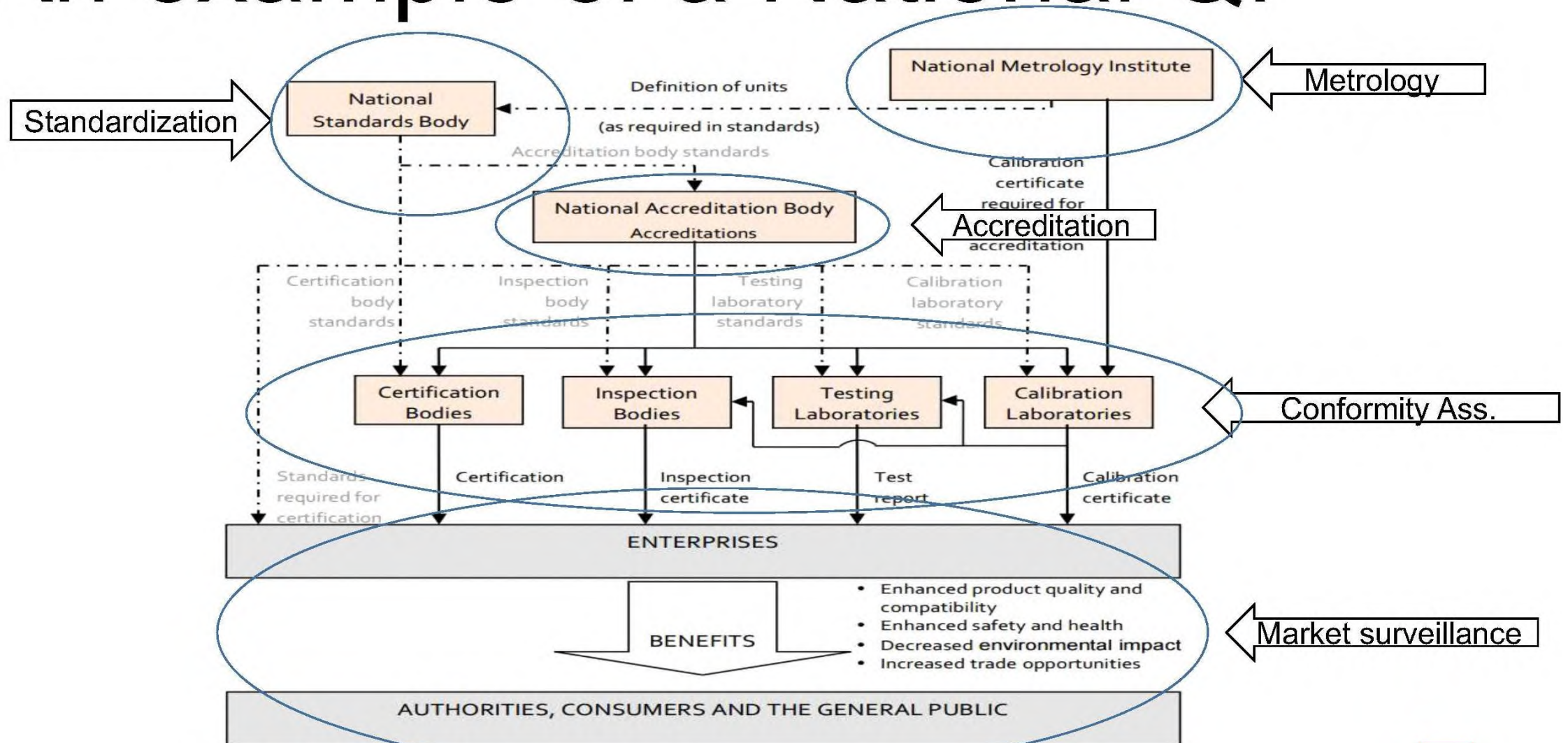


Quality infrastructure definition

- The organizations public and private that establishes and implement standardization, metrology, accreditation, conformity assessment and market surveillance
- The definition has been agreed by the BIPM, IAF, ILAC, ISO, IEC, ITU, ITC, OIML, UNIDO and UN/ECE
- Required for effective operation of domestic markets, and international recognition to foreign markets
- Critical element in sustaining economic development and environmental and social wellbeing

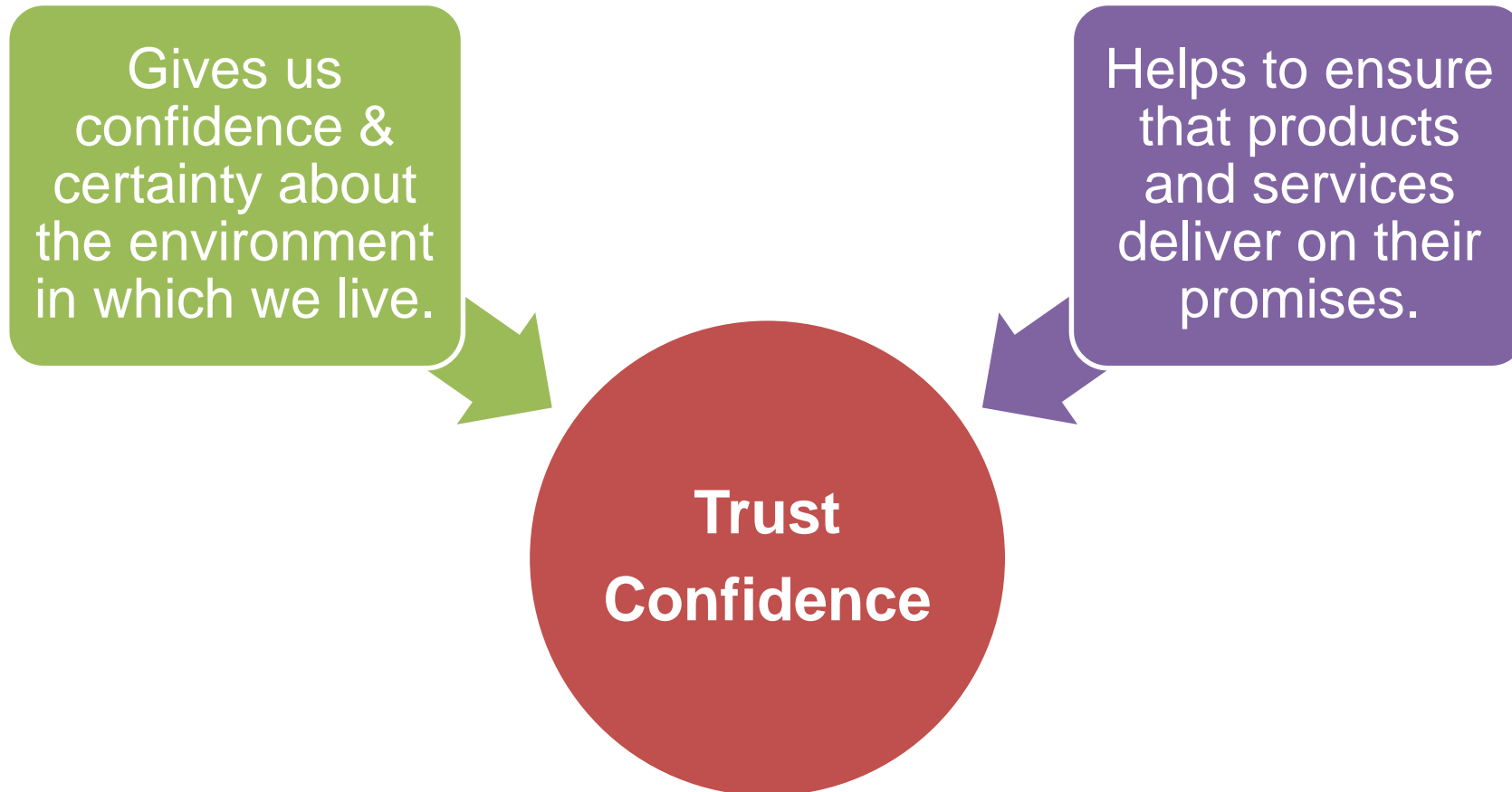
Presented at the "Risk-Based Consumer
Protection Workshop" June 25, 2018
Accra, GHANA

An example of a National QI



Source: World Bank 2007.

Conformity assessment



Conformity assessment

demonstration that specified requirements relating to a product, process, system, person or body are fulfilled.

(ISO/IEC 17000, Clause 2.1)

Conformity assessment techniques



Testing

determination of one or more characteristics of an object of conformity assessment, according to a procedure.



Evaluation

the process of **gathering evidence** about whether a product, process or service meets specified requirements. It is also sometimes used in the context of person certification.



Inspection

can include a visual examination, measurement or testing of physical items based on the **professional judgment** of the inspection bodies' personnel.



Examination

often used interchangeably to cover a number of techniques, but is used in a more specific way for certifying the **competence of a persons**.



Auditing

an audit is a systematic, independent and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which the audit criteria are fulfilled.



Assessment

process of determining whether an organization fulfils requirements related to its **technical competence**. Assessments are carried out during accreditation and peer assessment.

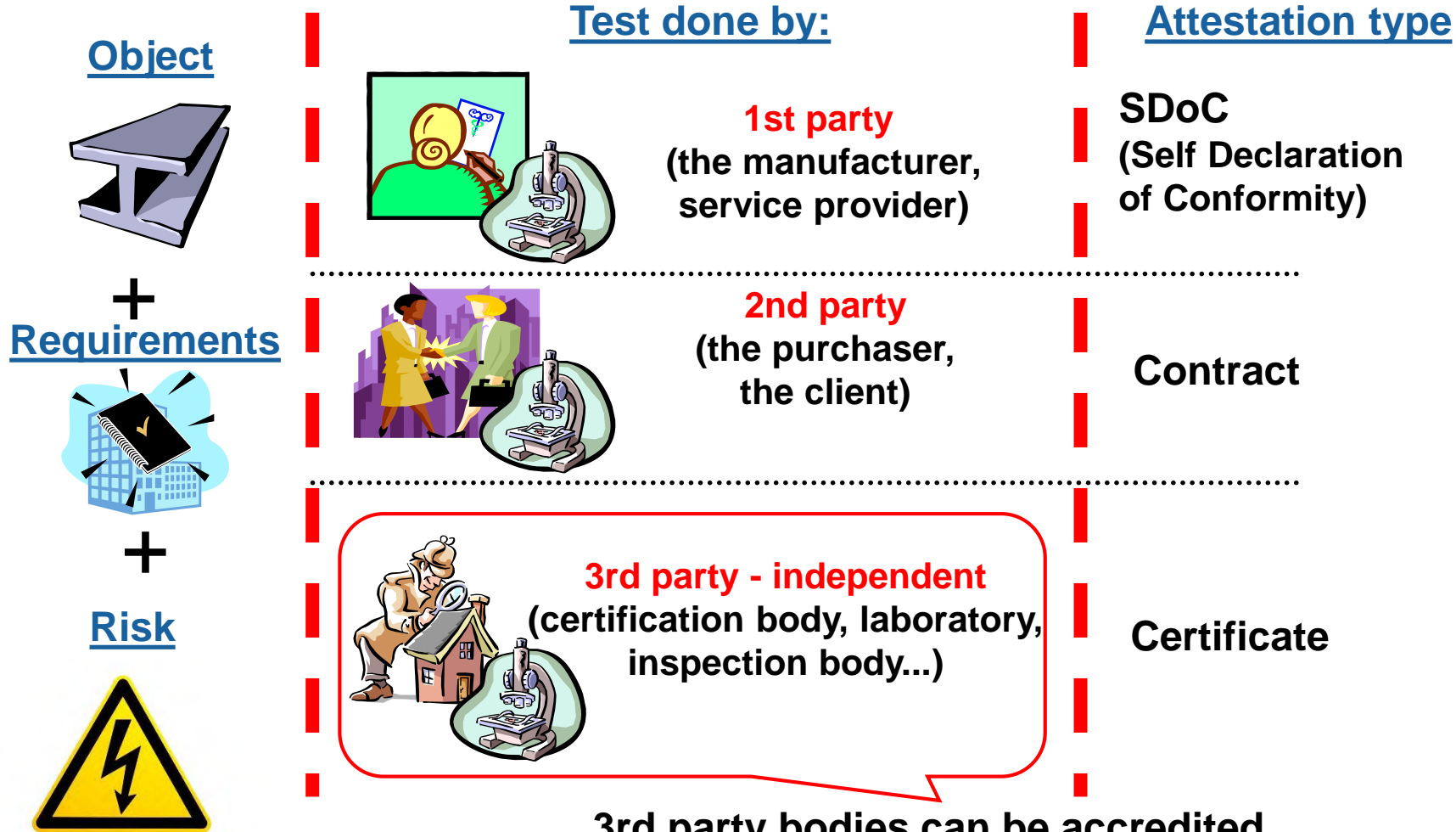
Conformity assessment bodies (CABs)

Conformity assessment activities are carried out by different types of **CABs**:

- testing laboratories
- inspection bodies
- certification bodies.

After the application of one or more conformity assessment techniques, a **claim of conformity** can be made.

Conformity assessment claims



3rd party bodies can be accredited.
Accreditation bodies are assessed by their peers

Third-party claims of conformity Certification

- **third party assurance** that a product, (services), process, personnel, organization or management system conforms to specific requirements.
- made by **independent** organizations of the person or organization that provides the object.

Examples include independent and impartial testing laboratories, inspection bodies or certification bodies.

Recognition of CABs

Accreditation

- A specific conformity assessment activity carried out by Accreditation Bodies (ABs) involving the **independent third-party** assessment of CABs with specified requirements.
- third-party attestation related to a CAB conveying formal demonstration of its **competence**.



TOOLBOX

Terms and definitions ISO/IEC 17000

Requirements for accreditation bodies – ISO/IEC 17011

<p>Requirements for Testing/ calibration Testing and calibration laboratories ISO/IEC 17025 Proficiency testing ISO/IEC 17043</p>	<p>Requirements for inspection bodies ISO/IEC 17020</p>	<p>Requirements for certification bodies</p> <table border="1"><tr><td><p>Management systems ISO/IEC 17021 and related parts ISO/IEC 17023</p></td><td><p>Persons ISO/IEC 17024 ISO/IEC TS 17027</p></td><td><p>Products ISO/IEC 17065 ISO/IEC 17067 ISO/IEC TR 17026</p></td></tr></table>	<p>Management systems ISO/IEC 17021 and related parts ISO/IEC 17023</p>	<p>Persons ISO/IEC 17024 ISO/IEC TS 17027</p>	<p>Products ISO/IEC 17065 ISO/IEC 17067 ISO/IEC TR 17026</p>	<p>Conformity assessments of suppliers ISO/IEC 17050-1 ISO/IEC 17050-2</p>	<p>Peer assessment ISO/IEC 17040</p>	<p>Mutual recognition ISO/IEC Guide 68</p>
<p>Management systems ISO/IEC 17021 and related parts ISO/IEC 17023</p>	<p>Persons ISO/IEC 17024 ISO/IEC TS 17027</p>	<p>Products ISO/IEC 17065 ISO/IEC 17067 ISO/IEC TR 17026</p>						



Presented at the "Risk-Based Consumer
Protection Workshop" June 25, 2018
Accra, GHANA

US Strategy and Principles

- United States standards strategy – ANSI publication
- US conformity assessment principles – ANSI publication
 - supplement language of TBT to clarify and focus of conformity assessment for US
 - foster increased acceptance of U.S. products in international markets through use of international standards as feasible
- NIST Special Publication 2000-01 ABC's of Conformity Assessment – Draft

Presented at the "Risk-Based Consumer
Protection Workshop" June 25, 2018
Accra, GHANA

Conformity Assessment Standards

(from NIST 2000-01 Draft)

	SDoC	Testing	Inspection	Certification	Management System Certification
Arrangements	N/A	Mutual Recognition Arrangement	Mutual Recognition Arrangement	Multilateral Recognition Arrangement	Multilateral Recognition Arrangement
Accreditation	N/A	Accreditation Bodies (ISO/IEC 17011)	Accreditation Bodies (ISO/IEC 17011)	Accreditation Bodies (ISO/IEC 17011)	Accreditation Bodies (ISO/IEC 17011)
Standard	ISO/IEC 17050 – Part 1 ISO/IEC 17050 – Part 2	Testing & Calibration Labs (ISO/IEC 17025)	Inspection Bodies (ISO/IEC 17020)	Certification Bodies (ISO/IEC 17065)	Registrars (ISO/IEC 17021)

Presented at the "Risk-Based Consumer Protection Workshop" June 25, 2018
Accra, GHANA

ANSI Accreditation Services

- Product certification programs - ISO/IEC 17065
- ANSI-ASQ ANAB joint accreditation program for laboratory and inspection bodies - ISO/IEC 17065, 17025, 17020
- Credentialing programs – Certification ISO/IEC 17024, certificate ANSI/ASTM E2659
- Greenhouse gas validation/verification bodies - ISO 14065
- Accreditation for food safety – ISO/IEC 17065

Presented at the "Risk-Based Consumer
Protection Workshop" June 25, 2018
Accra, GHANA

Use of NQI for Consumer Protection

- Pre-market controls
 - Establish regulations that refer to international standards
 - Follow work of international consumer organizations, e.g. ISO COPOLCO, Consumers International
- Post-market controls
 - Consumer protection agency
 - Establish framework for risk-informed decision making

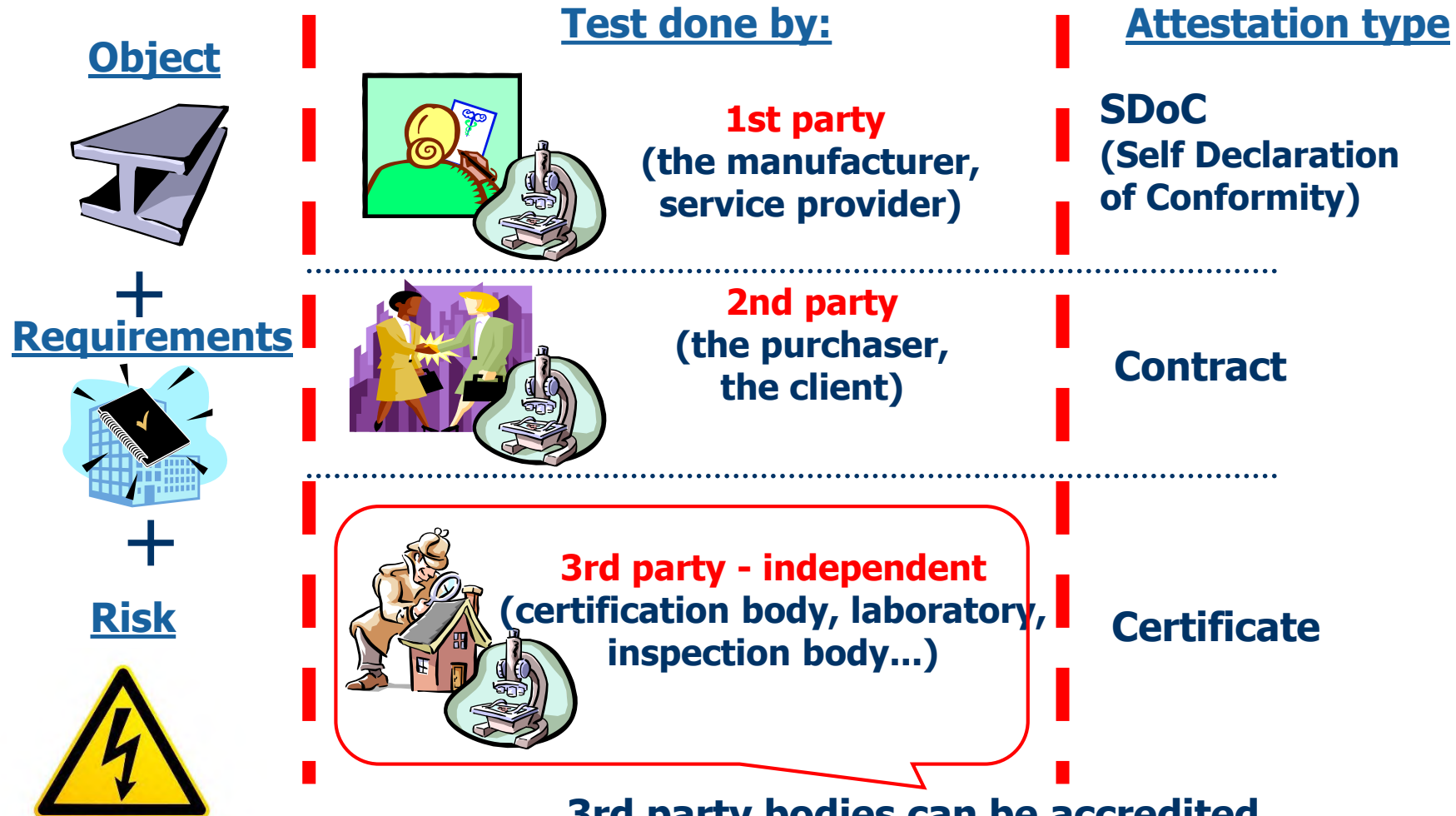
Presented at the "Risk-Based Consumer
Protection Workshop" June 25, 2018
Accra, GHANA

Use of Regulations and International Standards

- Establish regulations for consumer products, including conformity assessment, based on risk (TBT)
 - Initiative of Mauritius Standards Bureau (2017)
 - Safety of household electrical appliances - 20 IEC standards referenced in regulation
- Evaluate substandard products entering market
- Proactively evaluate international experience
 - Minimize missed opportunities – furniture tipping/child safety

Presented at the "Risk-Based Consumer
Protection Workshop" June 25, 2018
Accra, GHANA

Conformity assessment claims



**3rd party bodies can be accredited.
Accreditation bodies are assessed by their peers**

Work of COPOLCO

- Determine most effective areas of focus for consumer protection in standards
 - Food safety and labeling
 - Safety of household appliances (microwave ovens, vacuum cleaners, dishwashers and clothes washing machines)
 - Safety of toys, guidelines for child safety
 - Second-hand goods
- Promote evaluation of national issues in COPOLCO

Presented at the "Risk-Based Consumer
Protection Workshop" June 25, 2018
Accra, GHANA

Post-Market Controls

- Consumer Protection Agency, e.g. US Consumer Product Safety Commission
- Risk-Informed Decision Making (CPSC)
 - Use best available information in a formal or informal risk assessment to inform decision makers
 - Prevent or reduce unreasonable risk, account for uncertainty
 - Costs must bear a reasonable relationship to benefits

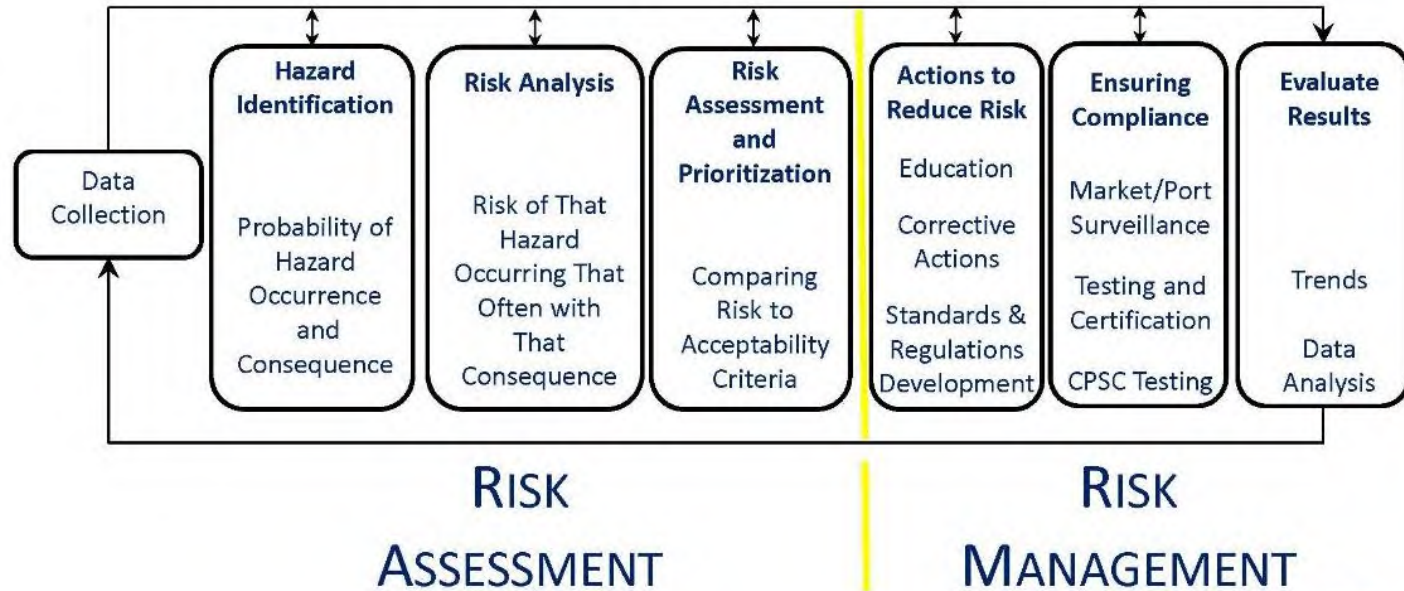
Presented at the "Risk-Based Consumer
Protection Workshop" June 25, 2018
Accra, GHANA

Risk-Based Analysis

- Information used (CPSC):
 - Frequency and severity of injuries
 - Causality of injuries
 - Chronic illness and future injuries
 - Cost and benefit of action
 - Unforeseen nature of the risk (“hidden” hazard?)
 - Vulnerability of the population at risk
 - Probability of exposure to the hazard
- Collection and use of data in analysis important

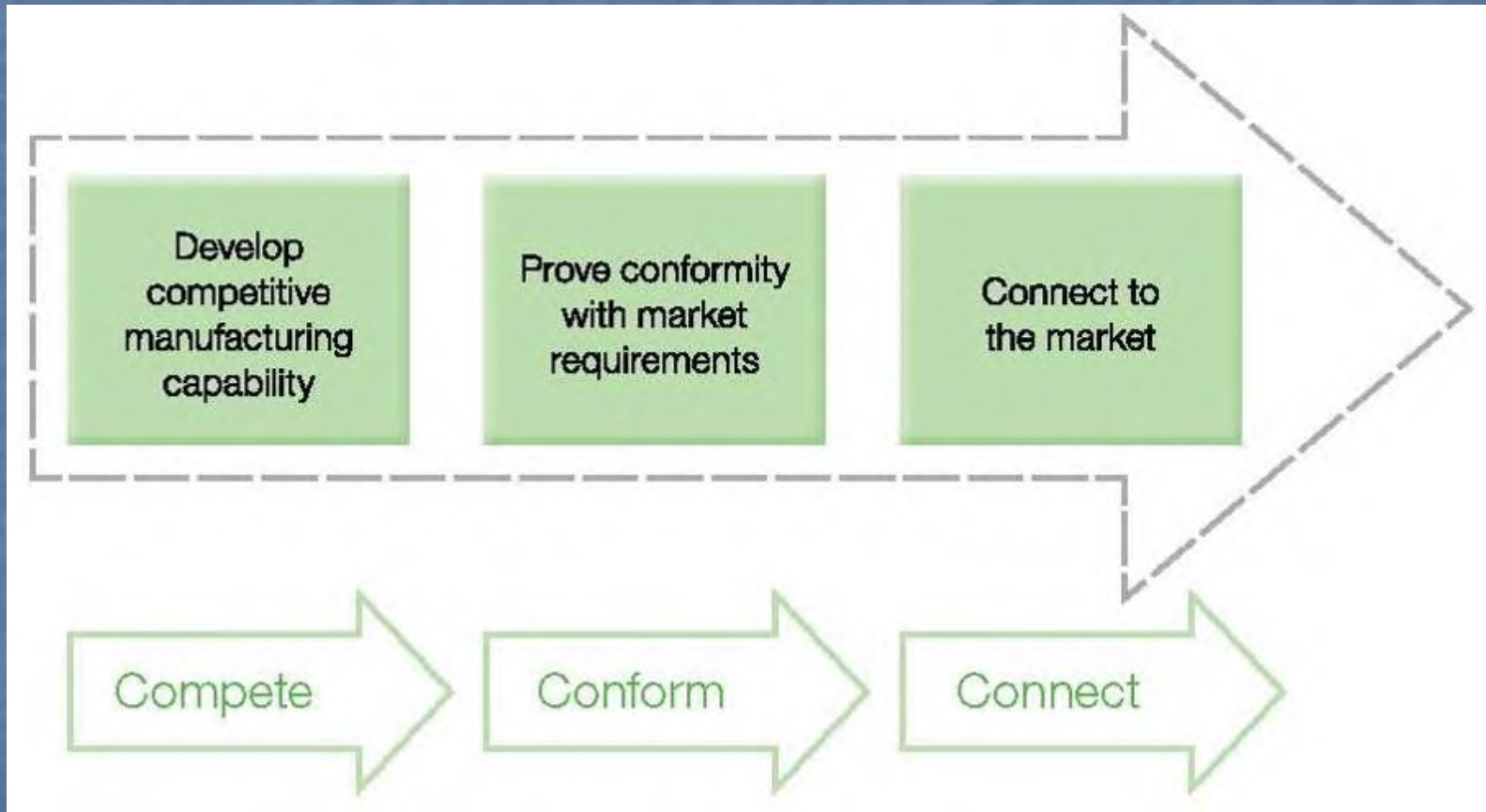
Presented at the "Risk-Based Consumer
Protection Workshop" June 25, 2018
Accra, GHANA

CPSC RISK MANAGEMENT PROCESS



Presented at the "Risk-Based Consumer Protection Workshop" June 25, 2018
Accra, GHANA

Trade Competitiveness



Presented at the "Risk-Based Consumer
Protection Workshop" June 25, 2018
Accra, GHANA

International Programs

- Tools, data for:
 - trade and industry competitiveness analysis
 - data on quality infrastructure constraints
 - product refusals/notifications tool
- Projects:
 - building the components of a quality infrastructure (UEMOA)
 - building an integrated quality infrastructure (UEMOA)
 - Southern Africa Development Community (SADC)

Presented at the "Risk-Based Consumer
Protection Workshop" June 25, 2018
Accra, GHANA

Value of Quality Infrastructure

- QI determines quality and affects trade, innovation, productivity, jobs, safety, and competitiveness
- 44% of firms had to conduct significant duplication of testing procedures to meet foreign requirements
- 30% of firms had to conduct complete duplication of testing procedures
- 68% of firms cited testing and certification costs as an important reason for not exporting

Presented at the "Risk-Based Consumer
Protection Workshop" June 25, 2018
Accra, GHANA

Issues Recognized in TBT

- TBT recognized conformity assessment activities can expedite or seriously hinder free flow of goods
- Most trade disputes are about conformity assessment
- TBT requires conformity assessment procedures not create unnecessary obstacles to international trade
- Use guides issued by international standardizing bodies
- Meet TBT's code of good practice
- Conformity assessment presently key issue in TBT Comm.

Presented at the "Risk-Based Consumer
Protection Workshop" June 25, 2018
Accra, GHANA

Quality Infrastructure is Critical for Trade, Innovation and Competitiveness



Increase Market Access

- Increase exports
- Increase product diversification
- Improve investment opportunities
- Benefit from trade agreements

Improve Firm's Productivity

- Reduce cost of trade and cost of doing business
- Benefit from economies of scale due to improved working methods and standardization
- Enhance innovation and technology transfer

Protect Public Good

- Public health and safety
- Consumer protection
- Social protections and labor conditions
- Environmental protection

Our QI Reform Approach

Identify

- Priority sector(s)
- Target market(s)
- Technical regulations

Diagnose

- Demand for QI service
- Supply of QI services
- QI service capacity

Prioritize

The relevant and necessary QI reforms to serve countries' priorities

Develop

The QI reform program and plans

Implement and Review

The QI reform project(s)

Key Principles

- Market-Drive Approach
- Establishing the Process for QI reforms, *we are not scientists!*
- Ensure transparency and availability of services
- Identify market failure that may justify public intervention/funding
- Engage with all the stakeholders (private sector, development partners, academia)

Ethiopia World Bank NQI Project

- Financed by World Bank Group for implementing National Quality Infrastructure Development Project (NQIDP)
- Objective is to improve delivery of quality assurance services to enterprises in targeted sectors
 - (i) leather and leather products; (ii) textile and garments; and (iii) agro-processed products
- Strengthen Ethiopian Standards Agency (ESA), Ethiopian National Accreditation Office (ENAO), and Ethiopian Conformity Assessment Enterprise (ECAE)

Presented at the "Risk-Based Consumer
Protection Workshop" June 25, 2018
Accra, GHANA

Potential Exports from Ghana

- Establish quality assurance services for exports:
 - Handicraft
 - Confectionary (cocoa-based products)
 - Cosmetics (shea butter based products)
 - Palm oil
 - Sustainable and traceable cocoa
- Are the necessary elements of NQI available?

Presented at the "Risk-Based Consumer
Protection Workshop" June 25, 2018
Accra, GHANA

ANSI-USAID Standards Alliance

- Capacity building for implementation of TBT agreement
- Establish opportunities for bilateral trade
- Identify priority sectors, target markets & regulations
- Diagnose need & availability for QI service & capacity
- Prioritize, develop and implement reforms
- Role of ASTM and UL standards in bilateral trade

Presented at the "Risk-Based Consumer
Protection Workshop" June 25, 2018
Accra, GHANA

Conclusions and Recommendations

- Assess NQI and any need for reform
 - National quality policy and standards strategy
 - Engage and promote national issues in ISO, IEC, WTO
 - Most trade issues are conformity assessment related
- Utilize ISO resources and CASCO toolbox
- Education and development of young professionals
- Regional/Sub-regional involvement important
- Build on past successes - UEMOA

Presented at the "Risk-Based Consumer
Protection Workshop" June 25, 2018
Accra, GHANA

Recommendations – Cont'd

- Support for capacity building: ISO, UNIDO, UNECE, Standards Alliance
- Participation in World Bank Group (WBG) – Trade and Competiveness financed project
 - Toolkit provides methodic process of enhancing NQI
 - Donor programs or loans available
 - Investment will pay off and benefit future generations
- Future programs in ANSI-USAID Standards Alliance

Presented at the "Risk-Based Consumer
Protection Workshop" June 25, 2018
Accra, GHANA

Thank you!

Questions:

deytec@frontiernet.net

1-301-461-5135

23276 Southdown Manor Terr., Unit 105

Ashburn, Virginia 20148

USA

Presented at the "Risk-Based Consumer
Protection Workshop" June 25, 2018
Accra, GHANA