

# The Role of Conformity Assessment in Support of Trade and Investment

Dr. Monideep Dey



*Consultation on public policy, regulation and standardization*

“Standards to support U.S. – Zambia Trade and Investment”

March 13-14, 2018

Lusaka, Zambia

# Outline

Introduction

Conformity assessment concepts and methods

US principles and practices for conformity assessment

Ongoing efforts for improving quality infrastructure

- ISO, UNIDO, World Bank Group, Standards Alliance

Conclusions and recommendations

Presented at the “Standards to support  
U.S. – Zambia Trade and Investment”  
March 13-14, 2018, Lusaka, ZAMBIA

# Background

Deytec, Inc. is a consulting company member of ANSI

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 “Standards to support  
U.S. – Zambia Trade and Investment”  
March 13-14, 2018, Lusaka, ZAMBIA

# 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, ISO General Assembly

Focus on developing economies: trade and competitiveness

Presented at the “Standards to support  
U.S. – Zambia Trade and Investment”  
March 13-14, 2018, Lusaka, ZAMBIA

# Objectives

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

Presented at the "Standards to support  
U.S. – Zambia Trade and Investment"  
March 13-14, 2018, Lusaka, ZAMBIA

# Standards for a better world



For more about ISO's work programmes as it affects consumers, see the ISO Directory for consumer internet participations: [www.iso.org/COPOLCO](http://www.iso.org/COPOLCO) interest  
 \* In collaboration with IEC



# Conformity assessment

Gives us confidence & certainty about the environment in which we live.

Helps to ensure that products and services deliver on their promises.



**Trust  
Confidence**

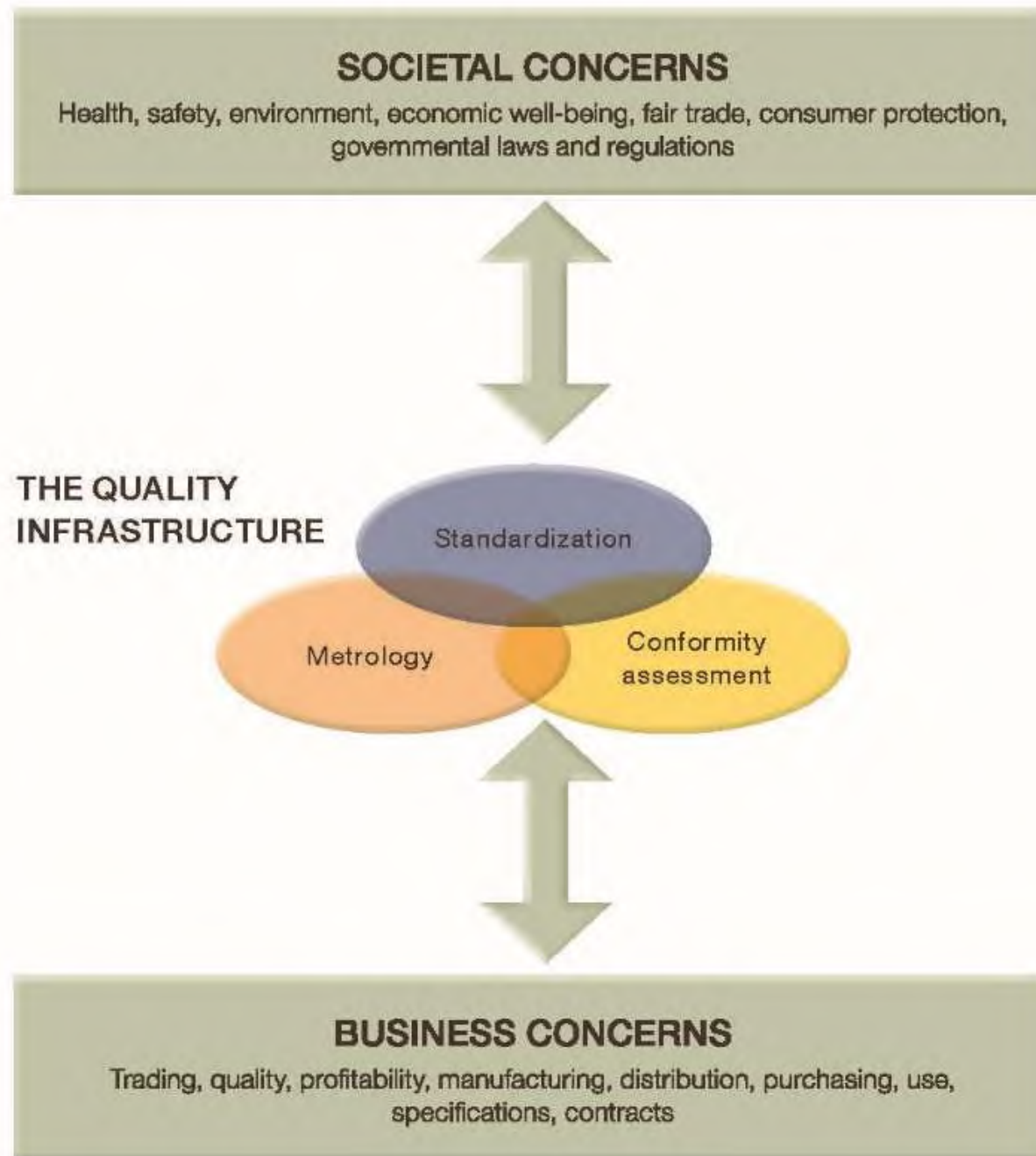


# Conformity assessment

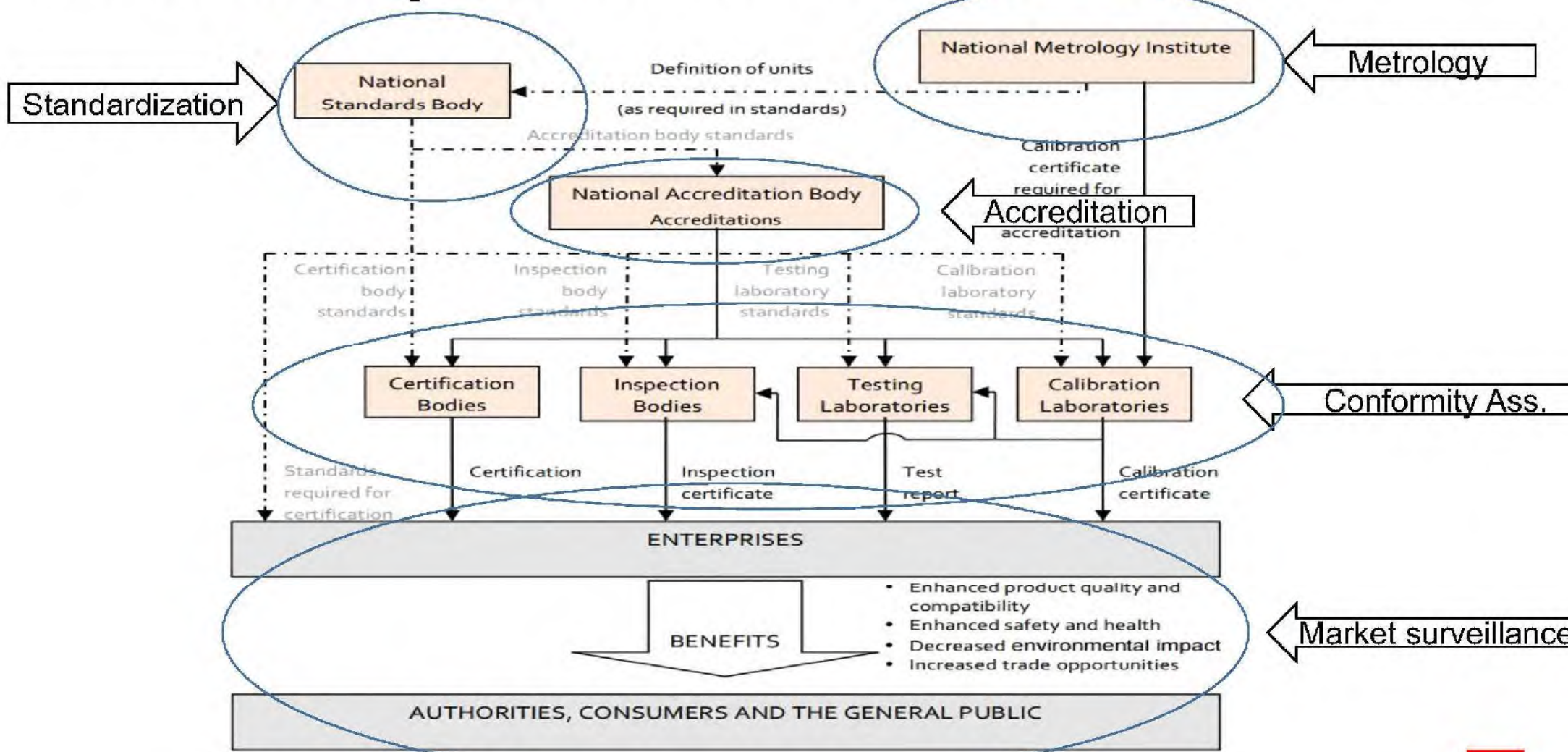
**demonstration** that specified requirements relating to a product, process, system, person or body are fulfilled.

(ISO/IEC 17000, Clause 2.1)





# An example of a National QI



Source: World Bank 2007.



# 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.

# TOOLBOX

## Terms and definitions ISO/IEC 17000

### Requirements for accreditation bodies – ISO/IEC 17011

Requirements for  
Testing/  
calibration

Testing and  
calibration  
laboratories  
ISO/IEC 17025

Proficiency  
testing  
ISO/IEC 17043

Requirements for  
inspection  
bodies

ISO/IEC 17020

Requirements for  
certification bodies

Management  
systems

ISO/IEC 17021  
and related parts  
ISO/IEC 17023

Persons

ISO/IEC 17024  
ISO/IEC TS 17027

Products

ISO/IEC 17065  
ISO/IEC 17067  
ISO/IEC TR 17026

Conformity  
assessments  
of suppliers

ISO/IEC 17050-1  
ISO/IEC 17050-2

Peer assessment ISO/IEC 17040

Mutual recognition  
ISO/IEC Guide 68

# 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 “Standards to support  
U.S. – Zambia Trade and Investment”  
March 13-14, 2018, Lusaka, ZAMBIA

# Conformity Assessment Standards

(from NIST 2000-01 Draft)

	SDoC	Testing	Inspection	Certification	Management System Certification
Agreements	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 “Standards to support U.S. – Zambia Trade and Investment”  
March 13-14, 2018, Lusaka, ZAMBIA

# 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 “Standards to support  
U.S. – Zambia Trade and Investment”  
March 13-14, 2018, Lusaka, ZAMBIA

# 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 “Standards to support  
U.S. – Zambia Trade and Investment”  
March 13-14, 2018, Lusaka, ZAMBIA

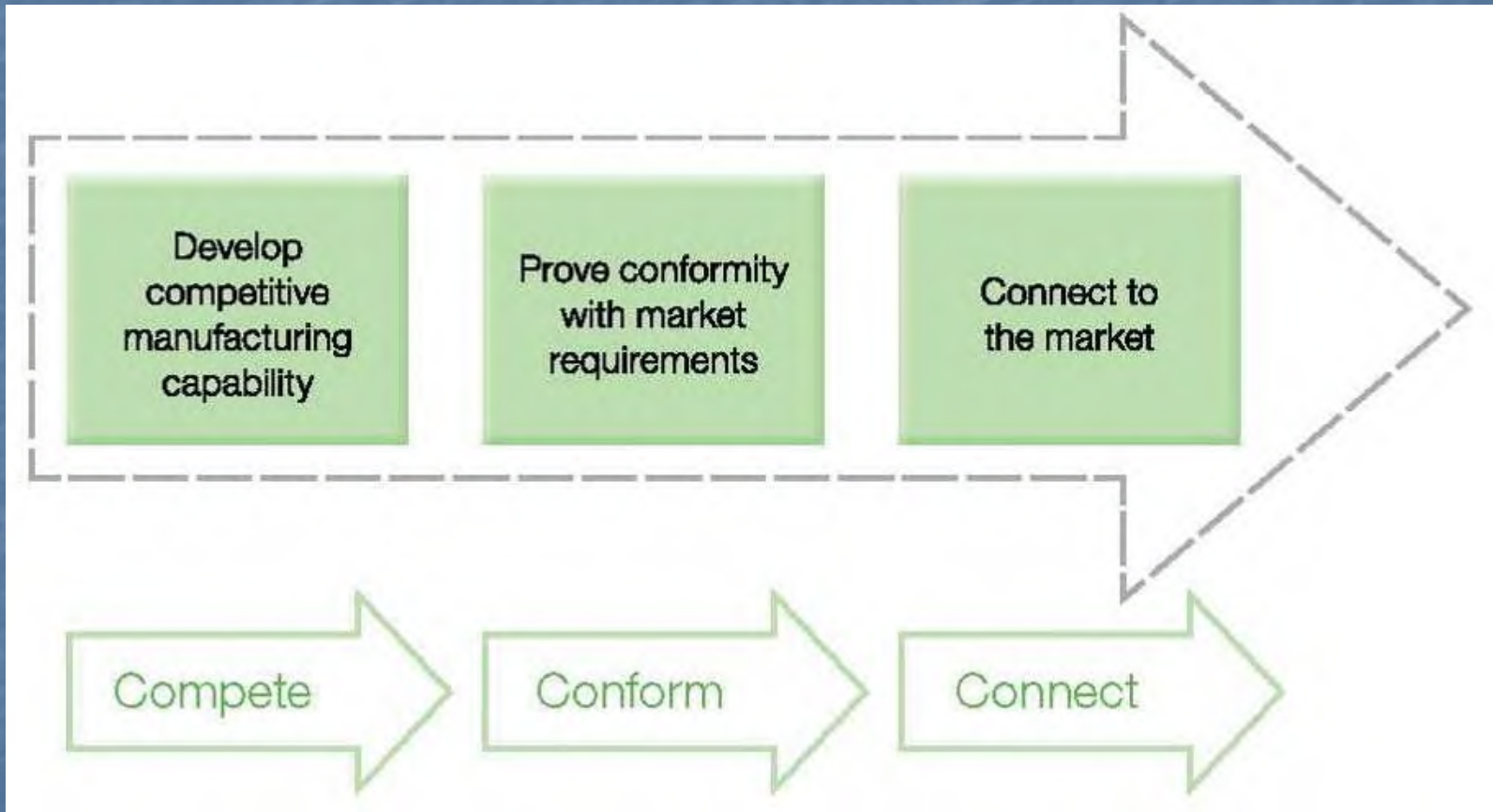


# ISO – UNIDO Partnership



Presented at the “Standards to support  
U.S. – Zambia Trade and Investment”  
March 13-14, 2018, Lusaka, ZAMBIA

# Trade Competitiveness (UNIDO)



Presented at the “Standards to support  
U.S. – Zambia Trade and Investment”  
March 13-14, 2018, Lusaka, ZAMBIA

# UNIDO 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 “Standards to support  
U.S. – Zambia Trade and Investment”  
March 13-14, 2018, Lusaka, ZAMBIA

# World Bank Group-PTB Project

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 “Standards to support  
U.S. – Zambia Trade and Investment”  
March 13-14, 2018, Lusaka, ZAMBIA

# Trade & Competitiveness Global Practice



## TRADE

Trade Policy and Integration  
Trade Facilitation and Logistics  
Markets and Competition Policies



## INVESTMENT CLIMATE

Business Environment | Investment Policy and Promotion  
Linkages to GVC and FDI | Quality Infrastructure



## COMPETITIVE SECTORS

Market Opportunities in Agribusiness, Manufacturing, and Tourism  
Skills for Competitiveness  
Spatial Solutions



## INNOVATION AND ENTREPRENEURSHIP

Entrepreneurship Development  
Innovation Policy  
Women Entrepreneurs



## INTEGRATED SOLUTIONS TOPICS

Global Value Chains | Productivity | Connecting to Markets and Opportunities  
Economic Diversification | Green Competitiveness | Digital Economy  
Trade and Competitiveness in Fragile and Conflict Situations

# 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)

# QI Diagnostics and Reform Toolkit Outline

- 1 • Overview and Quick Start Guide
- 2 • Importance of QI
- 3 • Demand Assessment
- 4 • QI Guides: elements and diagnostic tools
- 5 • How to Reform: Interventions and Approaches
- 6 • Challenges of QI Reform
- 7 • Monitoring and Evaluation of QI Reforms
- 8 • Case Studies



# QI Reforms Work Streams (1/3)

<p>WS1 Diagnostic</p>	<ul style="list-style-type: none"> <li>a) Identify Priority Sectors</li> <li>b) Assess Demand for Quality Assurance Services</li> <li>c) Assess QI Related Constraints</li> <li>d) Perform a QI Gap Analysis</li> </ul>	<p><b>Ethiopia:</b> identified three priority sectors for the export growth, i.e., (i) leather and leather products; (ii) textile and garments; and (iii) agro processed products, particularly fruits and vegetables.</p>
<p>WS2 Reforming QI legal and institutional framework</p>	<ul style="list-style-type: none"> <li>a) Conduct institutional mapping</li> <li>b) Assign clear responsibilities</li> <li>c) Update regulations</li> <li>d) Streamline the institutional structure</li> <li>e) Build capacity to participate in setting standards</li> <li>f) Support private sector engagement and consultation</li> </ul>	<p><b>Germany:</b> the accreditation system prior to 2009 was fragmented and costly as it consisted of 20 accreditation bodies in both the public and private sectors. The new accreditation organization, DAkkS, was established in 2009 with the Federal Government as the sole shareholder.</p>

# 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 “Standards to support  
U.S. – Zambia Trade and Investment”  
March 13-14, 2018, Lusaka, ZAMBIA

# 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 “Standards to support  
U.S. – Zambia Trade and Investment”  
March 13-14, 2018, Lusaka, ZAMBIA

# Opportunities for Bilateral Trade

- Topics-priority sectors of workshop
  - Transportation infrastructure
  - Energy safety
  - Sustainable agriculture
  - Food products

Presented at the “Standards to support  
U.S. – Zambia Trade and Investment”  
March 13-14, 2018, Lusaka, ZAMBIA

# Implementing Bilateral Trade

Specific products and services for bilateral trade

- Export
- Import
- Foreign direct investment (FDI)

Diagnose need & availability for QI service & capacity

Prioritize, develop and implement reforms

Monitoring and evaluation

Presented at the “Standards to support  
U.S. – Zambia Trade and Investment”  
March 13-14, 2018, Lusaka, ZAMBIA

# Conclusions and Recommendations

- Most trade issues are conformity assessment related
- Utilize ISO resources and CASCO toolbox
- Twinning arrangements in ISO
- Education and development of young professionals
- Development of national standard strategy, national quality policy, and national quality infrastructure
- Regional/Sub-regional involvement important

Presented at the “Standards to support  
U.S. – Zambia Trade and Investment”  
March 13-14, 2018, Lusaka, ZAMBIA

# Recommendations – Cont'd

Support for capacity building: ISO, UNIDO, ANSI-USAID  
Standards Alliance, UNECE

Participation in World Bank Group (WBG) –  
Trade and Competitiveness financed project

- Toolkit provides methodic process of developing NQI
- Donor programs or loans available
- Investment will pay off and benefit future generations

Standards Alliance activities to support bilateral trade

Presented at the “Standards to support  
U.S. – Zambia Trade and Investment”  
March 13-14, 2018, Lusaka, ZAMBIA

# Thank you!

Questions:

[eytec@frontiernet.net](mailto:eytec@frontiernet.net)

-301-461-5135

3276 Southdown Manor Terr.

Shburn, Virginia 20148

SA

Presented at the “Standards to support  
U.S. – Zambia Trade and Investment”  
March 13-14, 2018, Lusaka, ZAMBIA