The Role of Conformity Assessment in Support of Trade and Investment

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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
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 competiveness

Deytec, Inc., 2018

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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
Standards for a better world

- Water safety
- Performance of household appliances
- Products for elderly persons
- Cosmetics
- Counterfeit and fraud
- Financial services
- Waste disposal
- Food safety
- Personal care products
- Graphical symbols
- Environmental issues
- Social responsibility
- E-commerce
- Fire safety issues
- Tourism and services
- Network services billing
- Child-related products
- Safety of toys
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)
SOCIAL CONCERNS
Health, safety, environment, economic well-being, fair trade, consumer protection, governmental laws and regulations

THE QUALITY INFRASTRUCTURE
Standardization
Metrology
Conformity assessment

BUSINESS CONCERNS
Trading, quality, profitability, manufacturing, distribution, purchasing, use, specifications, contracts
An example of a National QI

**Standardization**
- National Standards Body
- National Accreditation Body
- Certification Bodies
- Inspection Bodies
- Testing Laboratories
- Calibration Laboratories

**Metrology**
- National Metrology Institute
- Calibration certificate

**Accreditation**
- Accreditation body standards
- Accreditation certificate required for accreditation

**Conformity Ass.**
- Certification
- Inspection certificate
- Test report
- Calibration certificate

**Market surveillance**
- Enterprises

**BENEFITS**
- Enhanced product quality and compatibility
- Enhanced safety and health
- Decreased environmental impact
- Increased trade opportunities

# Conformity assessment techniques

<table>
<thead>
<tr>
<th><strong>Testing</strong></th>
<th><strong>Evaluation</strong></th>
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<tr>
<td>Determination of one or more characteristics of an object of conformity assessment, according to a procedure.</td>
<td>The process of <strong>gathering evidence</strong> about whether a product, process or service meets specified requirements. It is also sometimes used in the context of person certification.</td>
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<table>
<thead>
<tr>
<th><strong>Inspection</strong></th>
<th><strong>Examination</strong></th>
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<td>Can include a visual examination, measurement or testing of physical items based on the <strong>professional judgment</strong> of the inspection bodies’ personnel.</td>
<td>Often used interchangeably to cover a number of techniques, but is used in a more specific way for certifying the <strong>competence of a person</strong>.</td>
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<th><strong>Auditing</strong></th>
<th><strong>Assessment</strong></th>
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<td>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.</td>
<td>Process of determining whether an organization fulfills requirements related to its <strong>technical competence</strong>. Assessments are carried out during accreditation and peer assessment.</td>
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## Toolbox

### Terms and definitions ISO/IEC 17000

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

<table>
<thead>
<tr>
<th>Requirements for Testing/calibration</th>
<th>Requirements for inspection bodies</th>
<th>Requirements for certification bodies</th>
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<tbody>
<tr>
<td>Testing and calibration laboratories</td>
<td>ISO/IEC 17020</td>
<td>Management systems</td>
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<tr>
<td>ISO/IEC 17025</td>
<td>ISO/IEC 17021 and related parts</td>
<td>Persons</td>
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<td>Proficiency testing</td>
<td>ISO/IEC 17043</td>
<td>ISO/IEC 17024</td>
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<td>ISO/IEC 17035</td>
<td>ISO/IEC TS 17027</td>
<td>ISO/IEC 17065</td>
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<tr>
<td>ISO/IEC 17021 and related parts</td>
<td>ISO/IEC 17023</td>
<td>ISO/IEC 17067</td>
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<tr>
<td>ISO/IEC 17004</td>
<td>ISO/IEC TS 17027</td>
<td>ISO/IEC 17026</td>
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#### Conformity assessments of suppliers

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

#### 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
# Conformity Assessment Standards
(from NIST 2000-01 Draft)

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<th>Management System Certification</th>
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<td><strong>Arrangements</strong></td>
<td>N/A</td>
<td>Mutual Recognition Arrangement</td>
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<td>Multilateral Recognition Arrangement</td>
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<td><strong>Accreditation</strong></td>
<td>N/A</td>
<td>Accreditation Bodies (ISO/IEC 17011)</td>
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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
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
ISO – UNIDO Partnership

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Trade Competitiveness (UNIDO)

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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)
World Bank Group-PTB Project

- QI determines quality and affects trade, innovation, productivity, jobs, safety, and competiveness
- 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
Trade & Competitiveness Global Practice

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

INVESTMENT CLIMATE
- Business Environment
- Linkages to GVC and FDI
- Investment Policy and Promotion
- 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

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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

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<th>Title</th>
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<td>1</td>
<td>Overview and Quick Start Guide</td>
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<tr>
<td>2</td>
<td>Importance of QI</td>
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<tr>
<td>3</td>
<td>Demand Assessment</td>
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<tr>
<td>4</td>
<td>QI Guides: elements and diagnostic tools</td>
</tr>
<tr>
<td>5</td>
<td>How to Reform: Interventions and Approaches</td>
</tr>
<tr>
<td>6</td>
<td>Challenges of QI Reform</td>
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<tr>
<td>7</td>
<td>Monitoring and Evaluation of QI Reforms</td>
</tr>
<tr>
<td>8</td>
<td>Case Studies</td>
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</table>
| **WS1** Diagnostic | a) Identify Priority Sectors  
b) Assess Demand for Quality Assurance Services  
c) Assess QI Related Constraints  
d) Perform a QI Gap Analysis | **Ethiopia**: 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. |
| **WS2** Reforming QI legal and institutional framework | a) Conduct institutional mapping  
b) Assign clear responsibilities  
c) Update regulations  
d) Streamline the institutional structure  
e) Build capacity to participate in setting standards  
f) Support private sector engagement and consultation | **Germany**: 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. |
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)
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
Opportunities for Bilateral Trade

- Topics - priority sectors of workshop
  - Transportation infrastructure
  - Energy safety
  - Sustainable agriculture
  - Food products
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
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
Recommendations – Cont’d

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

- Participation in World Bank Group (WBG) – Trade and Competiveness 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
Thank you!

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