International Telecommunication Union

ITU C&I Programme Pillars 3 and 4

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Conformance and Interoperability Programme Pillars 3 and 4

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Bangkok, Thailand,

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C&I Programme

- To tackle different obstacles to the achievement of conformity and interoperability, expressed by member states in ITU`s Decisions.

Regional Presence

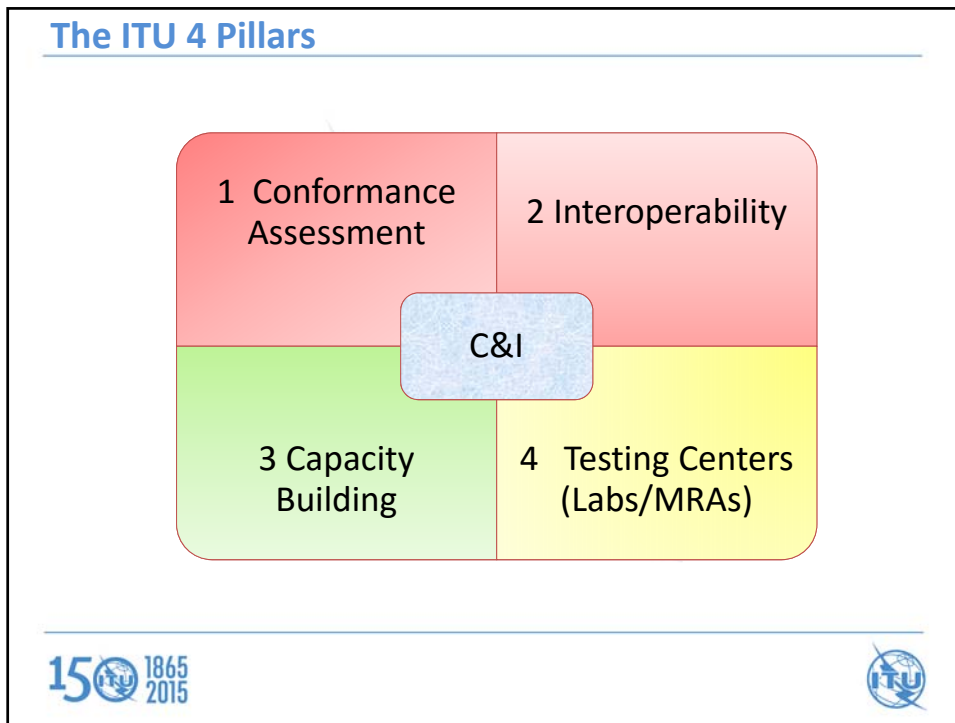C&I Task Force

Conformity Assessment benefits

- Conformity assessment builds consumers' trust and confidence in tested products and consequently strengthens business environment and, thanks to interoperability, the economy benefits from business stability, scalability and cost reduction of systems, equipment and tariffs.

- While economically Conformance and Interoperability (C&I) increase market opportunities, encourage trade and technology transfer and contribute to the removal of technical barriers, they socially help spreading ICT services availability and affordability to all people at a good level of quality.

ITU's Decisions – C&I Action Plan

- **Resolution 177** ITU Plenipotentiary Conference (PP-14)
- **Resolution 47** ITU World Telecommunication Development Conference (WTDC-10, rev. WTDC-14)
- **Resolution 76** ITU World Telecommunication Standardization Assembly (WTSA-08 rev. WTSA-12)
- **Resolution 62** Radiocommunication Assembly (RA-2012)
- **ITU Council Decisions** (2009, 2010, 2011,2012, 2013, 2014, 2015)

The ITU 4 Pillars

1 Conformance Assessment	2 Interoperability
3 Capacity Building	4 Testing Centers (Labs/MRAs)

C&I

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The ITU 4 "Pillars"

- **The Standardization Sector Side**
  - Conformity Assessment
  - Interoperability Events

- **The Development Sector Side**
  - Capacity building
  - Establishing C&I programmes in developing countries

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The Telecommunication Development Bureau Side

- Capacity building
- Establishment of test centres and appropriate C&I Regimes including MRAs in developing countries

ITU Forums with in-deep consideration for test centres and Capacity Building in the Regions
Held 2010 -2013:
- ❖ Africa (Kenya 2010, Ghana 2011)
- ❖ CIS (Moscow 2011)
- ❖ Americas (Brasilia 2012)
- ❖ Arab States (Tunis 2012) Forum and Training
- ❖ Asia Pacific (Myanmar 2013)

Held 2014:
- ❖ CIS (Moscow)

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Capacity building and test centres

- ITU is implementing proposals on human *capacity building*

- ITU will assist developing countries in the establishment of test facilities and in cooperation with *international institutions*:
  - ➢ UNIDO
  - ➢ International Laboratory Accreditation Cooperation (ILAC)
  - ➢ International Accreditation Forum (IAF),...)
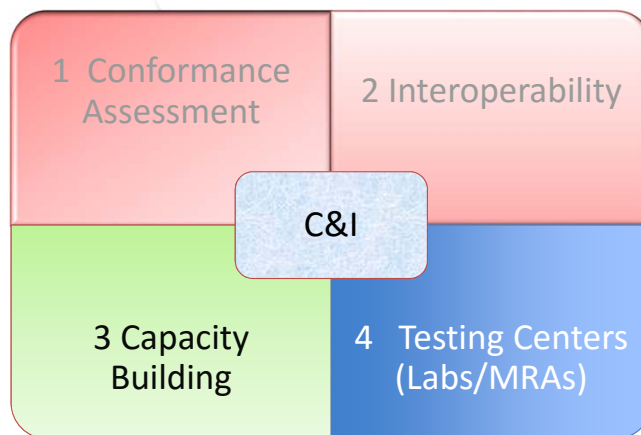 - ➢ Labs and R&D institutions

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Needs in Developing Countries for Test Labs and/or MRAs

- Conformity Assessment Bodies to contribute to create an orderly telecom apparatus market place

- Once reference standards and procedures are in place, test labs and/or MRAs can approve equipment for compliance

- Sharing test labs resources and using same procedures amongst countries and regions may lowering overall costs while continuing addressing regional priorities

- A robust framework (following international procedures – ISO/CASCO) needed for trust and confidence in test results and among test labs (MRAs)

Pillar 3

Partnership and Collaboration

The ITU Secretariat signed MoUs with Testing centers in the Regions for promoting activities of the C&I Programme e.g. capacity building events and direct assistance:

- AFR and ARB: CERT (Research and Studies Telecommunication Center, Tunisia)
- AMS: CPqD (Brazil)
- Europe: Sintesio (Slovenia) and Tilab (Italy)
- CIS: ZNIIS (Russia)
- ASP: Project proposal for collaboration under consideration by MIIT (China)
- International Accreditation Forum (IAF) and
- International Laboratory Accreditation Cooperation (ILAC)
- International Standardization Organization (ISO)
- UNIDO

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ITU Training activities on C&I

http://www.itu.int/en/ITU-D/Technology/Pages/CI_Events.aspx
ITU Academy – C&I training

- CIS Countries NGN integration testing, Moscow (Russian Federation), 2010 and 2011
- Africa and Arab Regions, Tunis 5-7 Nov 2012
- ARB Region, Tunis 2-6 April 2013 (EMC Compatibility)
- Africa Region, Tunis 28 October-1st November 2013 (EMC Compatibility)
- Americas Region, Campinas, 24-28 June 2013 (EMC Compatibility)
- ARB Region, Tunis 17-22 March 2014 (Mobile terminals)
- Americas Region, Campinas (Brazil) 12-16 May 2014, (Mobile terminals)
- Training Course on Conformance and Interoperability Testing for the Africa Region, 23-27 June 2014, Tunis (Tunisia)
- CIS Region: ITU Virtual Laboratory for Remote Tests of Equipment, New Technologies and Services", 10-12 November 2014, Moscow (Russian Federation)

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ITU Training activities on C&I for 2015

- Training Course for the Arab Region on Type Approval Testing for Mobile Terminals, Homologation Procedures and Market Surveillance, 20-24 April 2015, Tunis (Tunisia)
- Training Course for the Americas Region on Type Approval Testing for Mobile Terminals, NGN integration and interoperability testing, Homologation Procedures and Market Surveillance, 8-12 June 2015, Campinas (Brazil)
- Training Course for the Africa Region on Type Approval Testing for Mobile Terminals, Homologation Procedures and Market Surveillance, 27-31 July 2015, Tunis (Tunisia). Postponed to December 2015 (t.b.c.)
- Training Course for CIS Region, Moscow (Russian Federation), 7-9 July 2015
- ITU Asia-Pacific Centres of Excellence Training on Conformity and Interoperability, Beijing, P. R. China, 12-16 October 2015
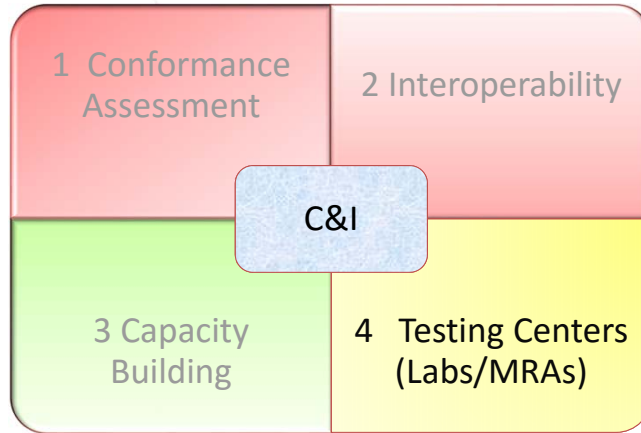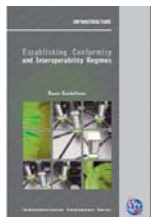
Training Goals

- The ITU Training on C&I – is a capacity event in the framework of the Conformity and Interoperability Programme that has as objective:
  - **Improve knowledge** of participants through the presentation of up-to-date information/technologies
  - Contribute to **increase awareness** on the relevance of C&I testing
  - Provide the necessary tools for participants to **replicate knowledge in their country**, taking into consideration national specificities
  - **Promote experience-sharing** on Certification/Homologation process, Lab. Accreditation and testing among the participants from different countries in Conformance and Interoperability field
  - Present a practical learning on **standards**, **regulations**, **real Lab experience** and **accreditation procedures**.

Pillar 4

ITU C&I Guidelines

Establishing Conformity and Interoperability Regimes – Basic Guidelines (2014)
These Guidelines address challenges faced by developing countries as they plan and review their own C&I regimes. Aspects covered by this publication include, inter alia, conformity assessment procedures; legislation to promote an orderly equipment marketplace; surveillance; coordination across regulatory agencies; and relevant international standards.

Guidelines for developing countries on Establishing Conformity assessment Test Labs in Different Regions (2012)
This set of guidelines is the first publication on C&I, its valuable content includes information concerning: The process required for building testing labs; A site analysis (e.g. existing testing labs, know-how);Collaboration mechanisms; Best practices; Reference standards and ITU Recommendations

Guidelines for the Development, Implementation and Management of Mutual Recognition Arrangements/Agreements on Conformity Assessment (2013)
These guidelines promote the understanding and establishment of Mutual Recognition Agreements (MRAs)
on conformity assessment that are intended to promote efficiency and resource sharing as well as to streamline the flow of products among participating Parties such as ITU Member States and private sector organizations, such as testing laboratories
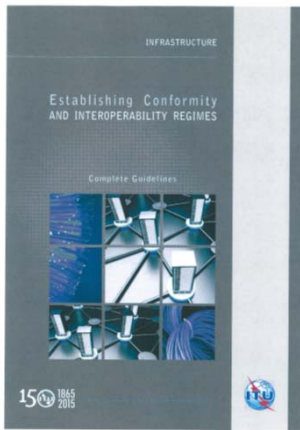
Feasibility Study for the establishment of a Conformance Testing Centre (2013)

This feasibility study describes environments, procedures and methodologies to be adopted to establish, manage and maintain a testing center covering different kinds of conformance and interoperability testing areas

New ITU C&I Guidelines

Establishing Conformity and Interoperability Regimes – Complete Guidelines (2015)
These Guidelines compiled from a careful collection of international best practices,
address challenges faced by developing countries as they plan and review their own C&I regimes. Aspects covered by this publication include, inter alia, conformity assessment procedures; the right type of approval system, the legislation required to promote an orderly telecommunication service and marketplace; the calculation of fees, and the ideal enforcement and Surveillance; coordination across regulatory agencies; relevant international standards.

Direct Assistance on C&I

A number of countries have expressed strong interest and requested direct assistance (e.g. Sri-Lanka, Kiribati, Mongolia, Zambia, Cameroon, Cote d'Ivoire) in establishing C&I infrastructure and procedures

The Direct Assistance provided through the Regional Offices will provide support taken into consideration all C&I aspects, as:

- Regulatory framework
- Institutions roles and typical procedures
- Mutual Recognition Agreements
- Funding
- National and Regional test centres and harmonized C&I programmes: Roadmap and Feasibility Study

C&I Regional Assessment Studies

The C&I Assessment Studies looks for promoting the establishment of Harmonized C&I Programmes, when possible.

It will collaborate to improve **regional integration** and foster the availability of highly qualified institutions (as Laboratories, Certification and Accreditation Bodies)

In an overall analysis, the Assessment Studies contributes to:

- Bridging the Standardization Gap,

- reducing the Digital Divide, and

- as is inherent to ICT technologies development, strengthens business environment for global players.

C&I Activities planned for 2016

- **Assessment Studies:**
  a) Follow Up for Maghreb, SADC, EAC, Central America, Caribbean: ITU assistance on establishing national laboratories/regional Laboratories and/or MRAs
  b) New C&I Assessment Study for Central Africa

- **Direct country assistance:** Specific training on C&I such as Market Surveillance, Analysis of Certificates and documentations for Homologation Procedures; b) Regulatory issue for revision/establishment of National C&I regimes; ICT standards for type approval; implementing technical collaboration or MRAs with other countries; Feasibility Studies for building C&I laboratories.

- **Training on C&I** (ASP, ARB, AFR, CIS): 1. C&I Regimes: Market surveillance, Analysis of Certificates and documentation for Homologation Procedures, best practices for developing countries; 2. C&I testing domains: Mobile terminals, wireless technologies and broadband.

ITU Cooperation

- Analysing the status of resources in the regions
- Finding regional agreements about possible locations for resources/ MRAs and testing capabilities: establishing Forums of Experts at Subregional Level
- Participation in Capacity Building activities, accreditation and certification
- Participation in the creation of a common C&I regime: MRAs and regional test laboratories

ITU : I Thank U

Additional Slides

WTDC-14, Outcomes on C&I

- Dubai Declaration
- Amendment of Resolution 47
- New ITU-D Study Group Question on C&I
- Objective 2, Output 2.2, Programme
- Regional Initiatives for AFR and ARB Regions

WTDC-14 outcomes on C&I

- **The Dubai Declaration** recognized that conformance and interoperability of telecommunication/ ICT equipment and systems can increase market opportunities and reliability and encourage global integration and trade.

- **Resolution 47** was amended, reaffirming the importance of collaboration and coordination between the three ITU Bureaux in implementing the ITU C&I programme.

WTDC-14 outcomes on C&I

- **Study Group Question 4/2,** mandate:

  "Studies of various issues related to conformance and interoperability are to be reported, and among others the description of the technical, legislative and regulatory framework that would be needed to implement appropriate C&I programmes by developing countries. Specifically, the following outputs are envisaged:

  - *a) Harmonized Guidelines on technical, legal and regulatory aspects of C&I Regime;*

  - *b) Feasibility studies regarding establishment of laboratories in different C&I Domains;*

  - *c) Guidance on the framework and procedures to establish MRA;*

  - *d) C&I Regimes, case studies established at national, regional or global levels;*

  - *e) Development of a methodology for assessing the situation of C&I regimes in place in the regions (or sub regions);*

  - *f) Experience sharing and case studies reports on C&I programmes implementation."*

WTDC-14 outcomes on C&I

Outcomes of Objective 2, Output 2.2 of the Dubai Action Plan, focusing on the following issues:

- a) **Educating** technicians, policy-makers and businesses on the importance of C&I procedures and testing, mobilizing the resources required to implement regional and national C&I programmes, in cooperation with other relevant regional and international organizations;
- b) **Providing assistance** to developing countries in the establishment of national, regional or subregional C&I programmes, and conducting assessment studies for facilitating the establishment of common conformance and interoperability regimes at national, regional and subregional level;
- c) **Preparing guidelines** on this process which outline the technical and human resources required and the international standards to be applied.

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C&I Regional Assessement Studies

- C&I infrastructure in regions/sub-regions/countries are being assessed

- Analysis of the status in the regions are being conducted

- Looking for promoting regional agreements about possible locations for resources (Labs), agreements and testing capabilities

- Close collaboration with regional experts in addressing capacity building activities, accreditation and type approval testing.

- Moving forward to establishing regional test centers and/or MRAs as appropriate

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C&I Regional Assessment Studies

Roadmap

- Conformity Assessment Bodies will contribute with an orderly telecom apparatus market place

- Once standards and procedures are in place, test labs and/or MRAs can approve equipment for compliance

- Sharing test labs resources and using same procedures amongst countries and regions, lowers overall costs while continues addressing regional priorities

- Setup of a robust framework (base on international procedures – ITU, ISO, IAF, ILAC, etc.) needed for trust and confidence in test results and among test labs

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C&I Regional Assessment Studies

Calendar

- **Assessment Study for SADC Region   completed 2014)**
    - The results of the Assessment Study have been presented during the Subregional Workshop for SADC (Southern African Development Community), 13-15 October 2014, Livingstone (Zambia)

- Final Report
- Survey Findings
- Outcomes of the Workshop for SADC, Livingstone, Zambia, 13-15 Oct, 2014
    - Recommendations: In Country C&I Test Lab
    - Criteria for selecting countries for establishing regional test centres
    - Proposed plan for a SADC framework MRA
- Media statement on the meeting of SADC Ministers Responsible for Communications, Postal and ICTs. Mangochi, Malawi, 21 November 2014

Assessment Study for **Maghreb** countries

- Mauritania, Morocco, Algeria, Tunisia, Libya (completed 2014)
- The results of the assessment study have been presented during the Subregional Workshop for Maghreb Countries, Tunis 9-11 Dec 2014
- Assessment Study for AMS (Caribbean) conducted in 2014, Assessment Studies for AMS (Central America) and AFR (EAC countries) are being conducted during 2015
  - Final Report
  - Survey Findings
  - Outcomes of the workshop for Maghreb, Tunis 9-11 December 2014
    - Recommendations: In Country C&I Test Lab
    - Criteria for selecting countries for establishing regional test centres
    - Proposed plan for a Maghreb framework MRA

Follow-up of Assessment Study for Maghreb

- Joint declaration signed between ITU Regional Office of Cairo and UMA the Secretariat General of the Arab Maghreb Union (UMA) for collaboration and support to Maghreb countries for establishing a common MRA

- First meeting of C&I Expert Committee for Maghreb, Rabat (Morocco), 23-25 November 2015

Assessment Studies for the Caribbean

The results of the first assessment were presented during the ITU C&I Workshop for Caribbean (2-4 December 2014, in St. Augustine, Trinidad and Tobago)

- Assessment Study on C&I for the Caribbean
- Report
- Outcomes

Follow-up of Assessment Study for the Caribbean

As one of the results of the assessment and workshop held for the Caribbean was the cooperation between an ITU Academia member, CPqD with Caribbean countries in regard to homologation and testing procedures. A high level Caribbean mission visited the laboratories of the CPqD in Campinas, Brazil, during the C&I training for the region in June 2015

Assessment Studies for EAC countries:

The East African Community (EAC) is the regional intergovernmental organization of the Republics of **Burundi**, **Kenya**, **Rwanda**, the **United Republic of Tanzania**, and the Republic of **Uganda**, with its headquarters in Arusha, **Tanzania**. **(ongoing 2015)**
The results of the assessment study will be presented during the Subregional Workshop for EAC countries, Nairobi 21-23 October 2015

Assessment Studies

- **Assessment Studies for Central America**
- The results of the first assessment will be presented during the ITU C&I Workshop for Central America **Managua, Nicaragua, 10-12 November 2015**

Costa Rica
El Salvador
Guatemala
Honduras
Nicaragua
Panama
Dominican Republic
+
Cuba

Other C&I Related activities in the Americas region

The ITU Americas Regional Office is supporting ITU C&I Initiative by promoting discussion opportunities in regional fora and events:

1. Regional Standardization Forum
A whole Session will be dedicated to ITU C&I Initiative
Event will take place on 21 September 2015 at CITEL Headquarters in Washington D.C., United States

2. ITU Workshop on Strategic Broadband Infrastructure for development for the Americas
Jointly organized with the Brazilian Regulator, it will take place from 26 to 29 October 2015, in Sao Paulo, Brazil, during the FUTURECOM Exposition