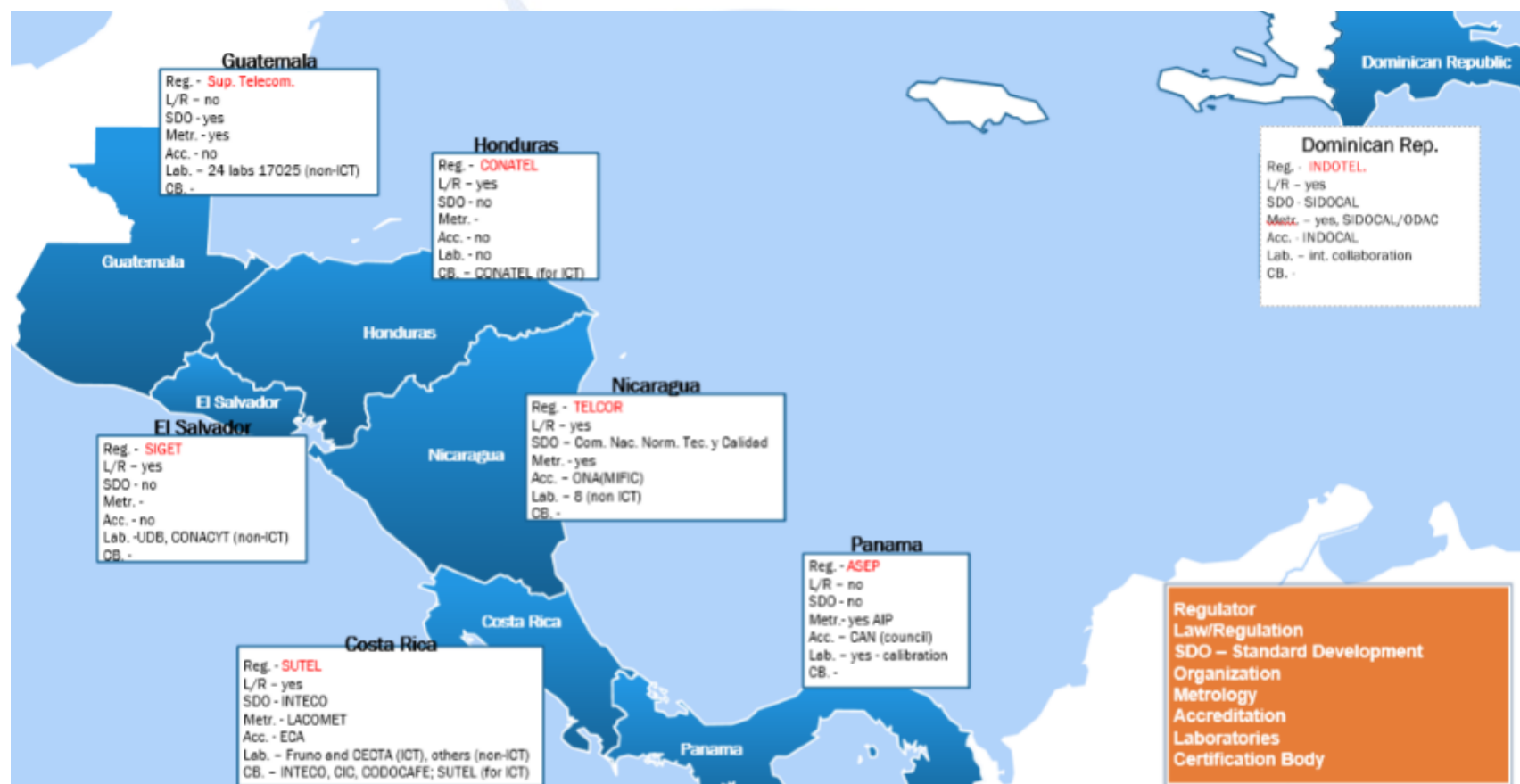# Standards capability in Central America and lessons learned from training programs

Sungnam CHOI

Program Director, CEABAD, Nicaragua

Status of ICT Standards Capabilities in CA

Guatemala
Reg. - Sup. Telecom.
L/R – no
SDO - yes
Metr. - yes
Acc. - no
Lab. – 24 labs 17025 (non-ICT)
CB. -

Honduras
Reg. - CONATEL
L/R – yes
SDO - no
Metr. -
Acc. - no
Lab. - no
CB. – CONATEL (for ICT)

Dominican Rep.
Reg. - INDOTEL.
L/R – yes
SDO - SIDOCAL
Metr. – yes, SIDOCAL/ODAC
Acc. - INDOCAL
Lab. – int. collaboration
CB. -

El Salvador
Reg. - SIGET
L/R – yes
SDO - no
Metr. -
Acc. - no
Lab. -UDB, CONACYT (non-ICT)
CB. -

Nicaragua
Reg. - TELCOR
L/R – yes
SDO – Com. Nac. Norm. Tec. y Calidad
Metr. - yes
Acc. – ONA(MIFIC)
Lab. – 8 (non ICT)
CB. -

Panama
Reg. - ASEP
L/R – no
SDO - no
Metr.- yes AIP
Acc. – CAN (council)
Lab. – yes - calibration
CB. -

Costa Rica
Reg. - SUTEL
L/R – yes
SDO - INTECO
Metr. - LACOMET
Acc. - ECA
Lab. – Fruno and CECTA (ICT), others (non-ICT)
CB. – INTECO, CIC, CODOCAFE; SUTEL (for ICT)

Regulator
Law/Regulation
SDO – Standard Development Organization
Metrology
Accreditation
Laboratories
Certification Body

❖ Source : ITU Conformity and Interoperability Training for Americas Region, Campinas, Brazil, 2016

Status of ICT Standards Capability in CA

- All countries except for one country have a standard framework that specifies the technical requirements for the import and distribution of ICT products and services in their jurisdictions

- Most countries have also adopted a wide range of conformity assessment. Some countries have their own accreditation body which is in accordance with ISO / IEC 17011

- Most countries have laws on metrology and a national institute for metrology

- With respect to certification, some countries have indicated that their telecommunications regulator has such responsibility

Status of ICT Standards Capabilities in CA (The Way Forward)

- Need regional approach to align purpose & regulation

- Need to create national laboratories (in-country)

- Need to create a regional test center

- Implementation of MRA (Mutual Recognition Arrangement) and approach for harmonization in the region
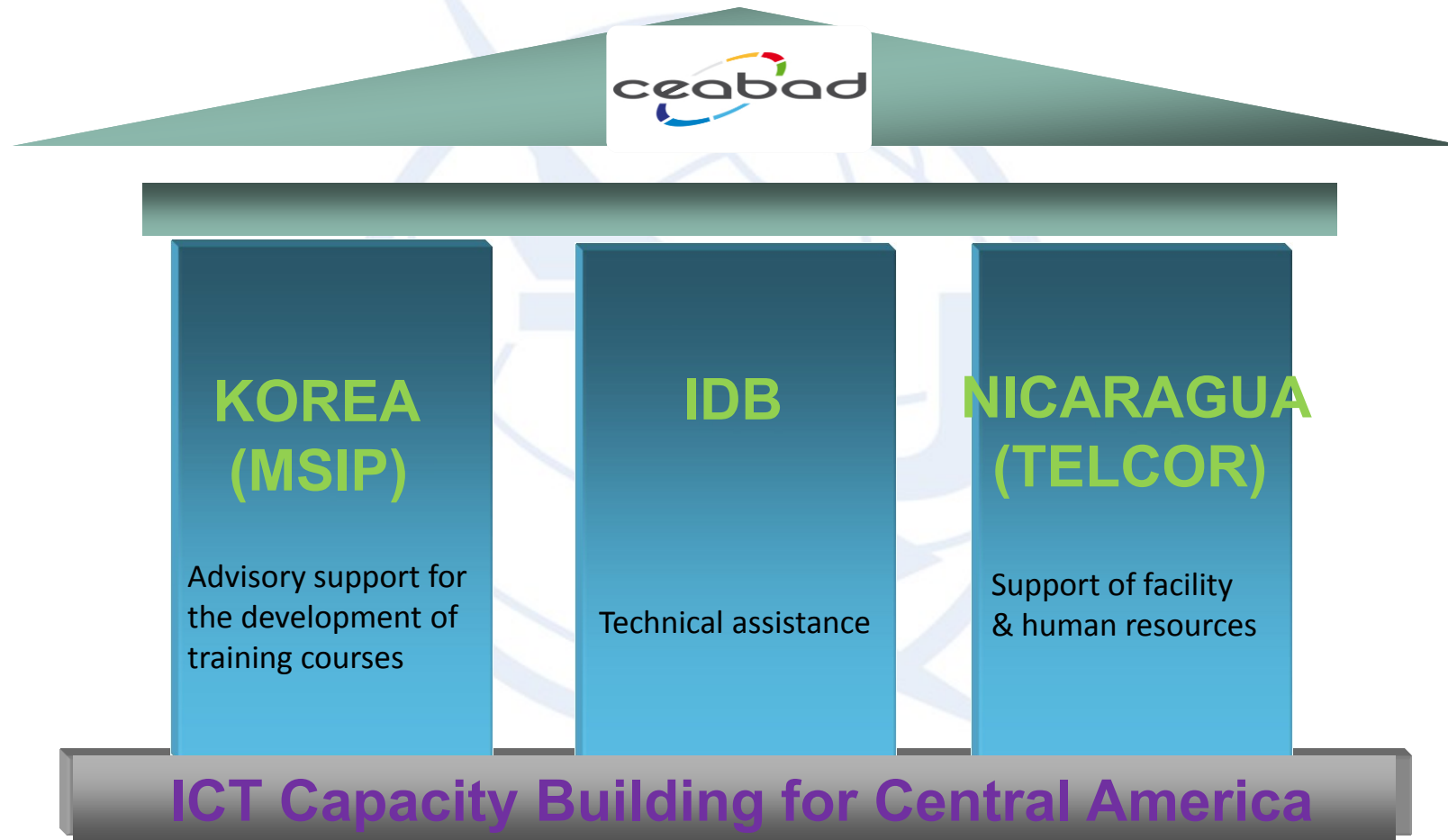
- Human capacity development

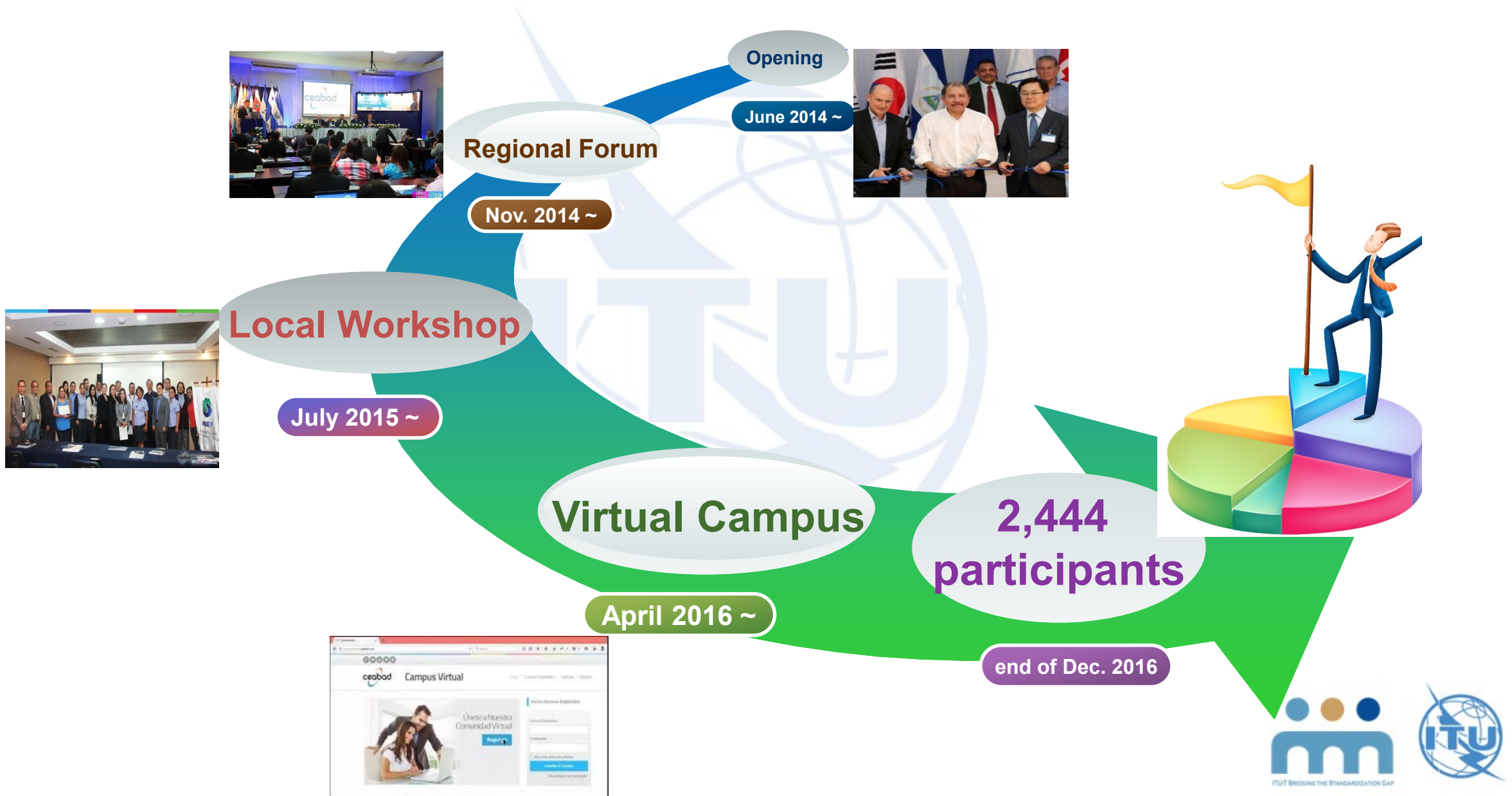# How Central America countries can develop their capability of standardization

- COMTELCA with the help of ITU should implement a regional integration policy that allows the availability of highly qualified infrastructure (such as laboratories, certification and accreditation bodies)

- COMTELCA and CEABAD, with the support of ITU, ISO, IAF and ILAC, should define a solid framework for collaboration to build trust between existing test laboratories and their results

- COMTELCA and CEABAD with the assistance of the ITU must reach regional agreements with all the resources (laboratories) and the capacities of tests.

- ITU, ISO, IAF, ILAC must provide all the expertise with the region to develop training activities, accreditation and certification tests to establish regional test centers and / or MRA

- ITU should support and recognize CEABAD as the center for capacity-building in telecommunication standardization in the Region.

Governance of CEABAD

KOREA (MSIP)

Advisory support for the development of training courses

IDB

Technical assistance

NICARAGUA (TELCOR)

Support of facility & human resources

ICT Capacity Building for Central America

History of CEABAD

Regional Forum
Nov. 2014 ~

Opening
June 2014 ~

Local Workshop
July 2015 ~

Virtual Campus
April 2016 ~

2,444 participants
end of Dec. 2016
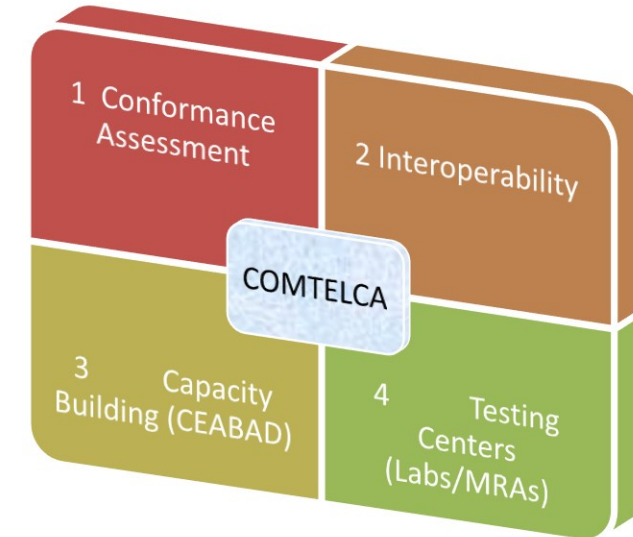
CEABAD Programs

Regional Forum

Local Workshop

E-Learning (12 courses)

Collaborations with ITU

- **Developing two online courses**

  - Broadband Network Operation, Broadband Economics

- **Organizing events in Nicaragua**

  - Regional Frequency Coordination Meeting (8-10 Mar, 2017)

  - CEABAD regional forum (26-28 Apr, 2016)

  - Workshop on Policy Guidelines and Economic Aspects of Allocation and Use of Radio Spectrum(31 Aug – 4 Sep, 2015)

CEABAD E-Learning Program (Spanish)

CEABAD Standardization Course

Module 1

Concepts, Objectives, Benefits and Procedures of Standardization. Legislation, Policy, and the role of a Government in the National Standardization. It also includes experiences from Europe, Asia and America.

Module 2

Concepts and Types of Conformity Assessment, its Procedure in Telecommunications Equipment and the Aspects related to: Homologation, Certification Systems and International Market Surveillance Analysis. In addition, it incorporates systematizations made in Europe, Asia and America.

Module 3

Intellectual Property Rights and Norms in the ICT industry, Conceptualizes the Patent Group and its Role, and Discusses the Mutual Recognition Agreements (MRAs) of testing and certification, their benefits, types, multilateral arrangements, actors, and bodies responsible for standardizing them.

Module 4

Some Criteria used in the design of conformity assessment systems such as Supplier Declaration of Conformity (DCP) and Certification. Content of a Technical Regulation and its definitions. Regional Experiences of conformity assessment, homologation and standardization of telecommunications equipment.

Lessons learned from training programs

Cultural Aspect
- Learning by speaking
- Focus on design & colors

Core Materials
- short but intensive
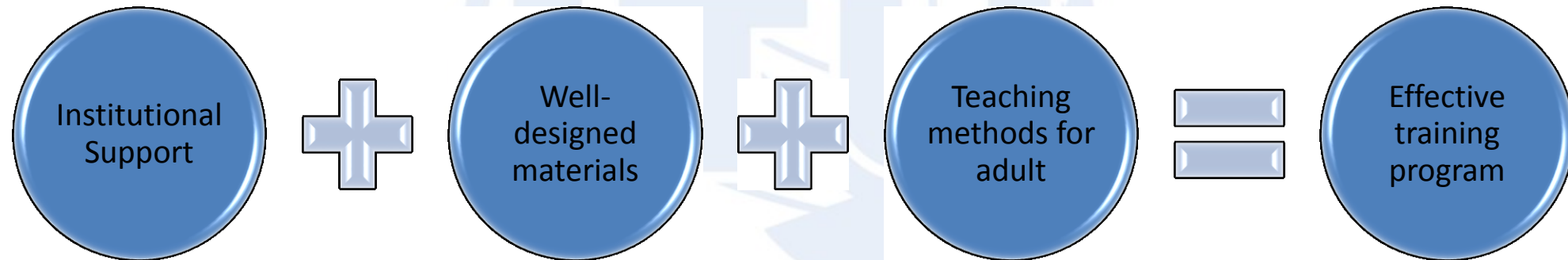- creating their interest(using movie, game, etc.)

Interactive Teaching
- Seamless communication with instructor

Institutional support
- Financial assistance
- Requirement of Promotion

Lessons learned from training programs

Institutional Support **+** Well-designed materials **+** Teaching methods for adult **=** Effective training program

Thank you

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