ITU ACTIVITIES IN CAPACITY BUILDING

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Presentation outline

New CoE Strategy Implementation

- Update on CoE Strategy Implementation
- Development of Training Materials
- Capacity Building Through Partnerships
- New Partnerships
- Challenges Experienced
- SC Roles
- ITU Arab CoEs Network Proposed OP-16
- Capacity Development Symposium
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Centres of Excellence

CoE Strategy Implementation - CoEs CA:

32 centers selected

26 signed a Corporation Agreement with ITU, remaining 6 are:
  1 – Arab Region
  3 – Asia Pacific Region
  2 – Africa
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**CoE Strategy Implementation – Selected CoE’s**

**Americas region**
- Number of Centres: 6
- Focus topics:
  - Broadband Access;
  - Cybersecurity;
  - Digital Broadcasting;
  - ICT Applications and Services;
  - ICT and Climate Change Mitigation and Adaptation;
  - Spectrum Management

**Europe region**
- Number of Centres: 5
- Focus topics:
  - Broadband Access; Capacity Building in Internet Governance; Conformance and Interoperability; Cybersecurity; e-Waste

**Commonwealth of Independent States (CIS) region**
- Number of Centres: 3
- Focus topics:
  - Broadband Access; Cybersecurity; Digital Broadcasting; e-Waste;
  - ICT Applications and Services; Policy and Regulation

**Africa region**
- Number of Centres: 6
- Focus topics:
  - Broadband Access; Cybersecurity; Digital Broadcasting;
  - ICT Applications and Services; Policy and Regulation;
  - Spectrum Management

**Arab region**
- Number of Centres: 6
- Focus topics:
  - Broadband Access; Capacity Building in Internet Governance; Conformance and Interoperability;
  - ICT Applications and Services; Policy and Regulation; Spectrum Management

**Asia-Pacific region**
- Number of Centres: 6
- Focus topics:
  - Broadband Access; Cybersecurity; Conformance and Interoperability; Policy and Regulation; Spectrum Management
COE STRATEGY IMPLEMENTATION – ITU ARAB SELECTED COES

- SPECTRUM MANAGEMENT
- BROADBAND ACCESS
- CONFORMANCE AND INTEROPERABILITY
- ICT APPLICATIONS AND SERVICES
- POLICY AND REGULATION
- CAPACITY BUILDING IN INTERNET GOVERNANCE

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CoE Strategy Implementation – CoE’s Steering Committee Meetings

<table>
<thead>
<tr>
<th>Region</th>
<th>Venue</th>
<th>Date</th>
<th>Host</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFR</td>
<td>Mauritius</td>
<td>2-4 December 2015</td>
<td>EMTEL</td>
</tr>
<tr>
<td>AMS</td>
<td>Colombia</td>
<td>25-27 November 2015</td>
<td>CINTEL</td>
</tr>
<tr>
<td>ARB</td>
<td>Tunisia</td>
<td>17-18 November 2015</td>
<td>CIFODECOM</td>
</tr>
<tr>
<td>ASP</td>
<td>India</td>
<td>28-29 January 2016</td>
<td>Ministry of Communications and Information Technology</td>
</tr>
<tr>
<td>CIS</td>
<td>Rep. of Kyrgyzstan</td>
<td>9 December 2015</td>
<td>Ministry of Transport and Communications and Institute of Electronics and Telecommunications</td>
</tr>
<tr>
<td>Europe</td>
<td>Denmark</td>
<td>19 January 2016</td>
<td>European Communication Office</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Activities</th>
<th>Global</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planned</td>
<td>69 (10 Arab)</td>
</tr>
<tr>
<td>Implemented</td>
<td>39 (6 Arab)</td>
</tr>
</tbody>
</table>

A total of $45,916 was received from trainings as at 13/11/2015.
CoE Strategy Implementation – HCB Support to CoE’s

- Development of standardized templates
- Continued development of training materials
- ITU Academy platform upgrade
- Fees collection through implementation of payment based enrolment
- Provision of bank transfer option as an additional method of payment
- Development of a Coordinators guide and user rights to guide utilization of the new platform
- Development of Instructors manual to support maximized utilization of new features of the platform
- Development of plaques for each CoE
DEVELOPMENT OF TRAINING MATERIALS

- Training programs developed / under development
  - Spectrum Management Training Program (SMTP)
  - Quality of Service Training Program (QoSTP)
  - ICT & Climate Change Training Programme (ICTCCTP)

- Existing training materials are also being aligned to ITU Academy Quality Standards.
  - Economics of Broadband and ICTs.
  - ICT network Deployment and Operation. (with funding from Inter-American Development Bank)
  - Smart Sustainable Cities
  - Conformance and Interoperability
  - Cybersecurity
  - Accessibility
Development

- A total of 15 Modules
- 14 Modules developed
- Module on Terrestrial TV Broadcasting Planning and Digital Transition being developed
- A Pilot programme of the Obligatory Module 1, was conducted between December 2014-February 2015. 40 participants enrolled
- Promotional Video produced to be shared at the end of this presentation

SMTP Modules:

Legal basis and regulatory framework of spectrum management
OM2 - Spectrum engineering fundamentals
OM3 - Wireless telecommunication technologies
OM4 - Economic and market tools of spectrum management
OM5 - Strategic planning and policies for wireless innovation.
EM1.1: Spectrum monitoring
EM1.2: Enforcement and type approval of equipment
EM1.3: SM for satellite systems
EM1.4: SM for HF systems, science, maritime and amateur services
EM1.5: SM for aeronautical and radio determination services and military systems
EM1.6: Computer-aided spectrum management
EM2.1: (Legal Specialization): Advanced spectrum authorization regimes
EM2.2: (Legal Specialization): Socio-economic impact of spectrum regulation; competition and consumer protection
EM2.3: (Technical Specialization): Terrestrial TV broadcasting planning and digital transition
EM2.4: (Technical Specialization): Opportunistic spectrum access and cognitive radio.

Next Steps

- Discussions with Universities on-going for possible partnership on the delivery of the SMTP
  - CTU
  - CINTEL
  - Arab Academy for Science, Technology & Maritime Transport
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QoSTP

- Total of 13 Modules
- 11 modules have been developed and peer reviewed
- The module on Regulatory Aspects of QoS (OM5) is still under development.
- Development of Overview module is pending the conclusion of the Regulatory Module.

Modules for the QoSTP

- OM 0 Overview Module
- OM 1 Introduction - Quality of Service and Quality of Experience
- OM 2 Subjective assessment of voice quality
- OM 3 Objective assessment of voice quality
- OM 4 QoS and QoE for Multimedia and assessment methods
- OM 5 Regulatory Aspects of QoS
- EM 1.1 Telephonometry
- EM 1.2 Network Performance Measurement
- EM 1.3 OAM for Performance Measurement
- EM 2.1 Hands-free communication and user interfaces in vehicles
- EM 2.2 Traffic management
- EM 3.1 QoS for mobile services
- EM 3.2 Bitrate measurement of Internet connections

Next Steps

- Discussions on-going for possible partnership on the delivery of the QoSTP
  - CERT-Tunisia
ICT & Climate Change Training Programme (ICT&CCTP)

- Total of 21 modules Proposed
- Coordination team to oversee development of the materials has been set up
- Recruitment of experts to develop modules is On-going

Modules for ICT&CCTP

- OM: Overview Module.
- FM1: Introduction to ICT & Climate Change.
- FM2: Roles of Stakeholders in ICT & Climate Change.
- FM3: Developing ICT Service Provider Strategies.
- FM4: Assessing the Impact of ICT on Climate Change.
- FM5: Applying Green ICT Strategies.
- FM6: E-waste and the Circular Economy.
- AM1.1: Climate Modelling
- AM 1.2: The role of Satellite & Radio Communication in Environmental Modelling
- AM1.3: Global/Regional Frameworks for GHG Emissions Reduction
- AM2.1: Policy Makers & Regulators
- AM2.2: TSPs and IT Service Providers
- AM3.1: Telecom Service Provider (TSP) Strategies
- AM3.2: IT Service Provider Strategies (including Cloud Services)
- AM3.3: Adaptation for Infrastructure Providers
- AM4.1: How to carry out a full LCA
- AM4.2: How to Assess the Carbon Footprints of Sectors, Countries and Regions
- AM5.1: Improving the Energy Efficiency of ICT Products and Services
- AM5.2: GHG reductions in the Power Sector
- AM5.3: Decarbonising Transport
- AM5.4: Smart & Sustainable Cities.
- AM6: The End-of-Life Stage in Life Cycle Assessment
Other Programmes Developed within the Framework of the ITU Academy

- Smart Sustainable Cities (Developed with the Asia Pacific CoE)
- Accessibility
- Two Modules on
  - Economics of broadband and ICTs
  - ICT network deployment and operation (funding from Inter-American Development Bank)
- Review of materials on Conformance and Interoperability to align to ITU Academy standards
Capacity Building Through Partnerships

Training programmes in spectrum management are run in collaboration with Rhode & Schwarz under this agreement.

Satellite communication training supported by BR has been conducted under this agreement.

Training programmes in wireless networking are run in collaboration with International Centre for Theoretical Physics (ICTP).

Training programmes in Universal Services Policy for Broadband and Smart Learning Implementation – Arab Region.
New Partnerships

ITU and UKTA
Agreement Signed in June for the delivery of a joint online Master of Communications Management. Applications for the Masters degree are open and you can apply via visiting the ITU Academy website: https://academy.itu.int

ITU and CTU
A Corporation Agreement between ITU and Czech Technical University (CTU) is to be signed for the delivery of the spectrum management training programme.
Challenges Experienced

1. Late commencement of implementation of training activities

2. Late submission of training documents to ITU for standardization and advertising of courses

3. The templates provided for preparation of documents not yet fully used and in some instances they are modified when used

4. CoE’s not yet utilizing the ITU Academy for advertising of their courses fully

5. Implementation of online payments generated the following challenges:
## Challenges Experienced

<table>
<thead>
<tr>
<th>Issue</th>
<th>Region/s</th>
<th>Proposed/implemented Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual generation of invoices</td>
<td>Europe</td>
<td>Working on customizing the platform for automatic generation of invoices</td>
</tr>
<tr>
<td>Limited access to bank cards (credit cards and debit cards)</td>
<td>Africa, AMS</td>
<td>Provided an option for payment using bank transfers</td>
</tr>
<tr>
<td>Original invoices required which should not be more than 3 days when</td>
<td>CIS, ASP</td>
<td>ITU Regional coordinator issues the invoice manually using the template provided.</td>
</tr>
<tr>
<td>received. Scanned PDF invoices not accepted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payment of a course more than once by one participant. This is a</td>
<td>AMS</td>
<td>The manual registration of participants should be only reserved for special cases and assessed on a case by case basis.</td>
</tr>
<tr>
<td>result of the participant having been registered manually prior to</td>
<td></td>
<td></td>
</tr>
<tr>
<td>payment.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulties to make international payment (too much time for bank</td>
<td>AMS, ARB, ASP, CIS, AFR</td>
<td>Payment to CoE’s, ITU Reginal Office or UNDP. (temporary solution for countries where national legislation restricts payments, and are assessed on individual merits)</td>
</tr>
<tr>
<td>transfers, tax too high, embargos, national restrictions on purchase</td>
<td></td>
<td></td>
</tr>
<tr>
<td>of foreign currency ...)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automatic group invoices for companies</td>
<td>Europe</td>
<td>Solutions still being discussed with platform developer</td>
</tr>
<tr>
<td>Late requests for invoices (late advertising of courses). Since</td>
<td>CIS, ARB</td>
<td>Encourage CoE’s to advertise for courses early to allow for smooth implementation of payment based enrolment</td>
</tr>
<tr>
<td>enrolment</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SC Roles

SC Role – To facilitate cooperation of the regional CoE’s
- How can this role be achieved?
- How can ITU assist to intensify cooperation between the CoE’s and across regions?

SC Role – To advice on operations of the CoE’s
- Timelines on advertising of courses on the ITU Academy Platform
- Strategies to increase participation in CoE activities
## ITU ARAB COES NETWORK PROPOSED OP-16

<table>
<thead>
<tr>
<th>No.</th>
<th>From</th>
<th>To</th>
<th>Title of the event</th>
<th>Country</th>
<th>Status</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>14/03/2016</td>
<td>16/03/2016</td>
<td>Training on Business Analysis for ICT projects</td>
<td>Sudan</td>
<td>Confirmed</td>
<td>ICT Applications</td>
</tr>
<tr>
<td>2</td>
<td>18/04/2016</td>
<td>20/04/2016</td>
<td>Training on Project Management for ICT Implementation</td>
<td>Sudan</td>
<td>Confirmed</td>
<td>ICT Applications</td>
</tr>
<tr>
<td>3</td>
<td>17/05/2016</td>
<td>19/05/2016</td>
<td>Training on IPv6 Deployment</td>
<td>Sudan</td>
<td>Confirmed</td>
<td>ICT Applications</td>
</tr>
<tr>
<td>4</td>
<td>14/06/2016</td>
<td>16/06/2016</td>
<td>Training on Cloud Computing</td>
<td>Sudan</td>
<td>Confirmed</td>
<td>ICT Applications</td>
</tr>
<tr>
<td>5</td>
<td>20/05/2016</td>
<td>22/05/2016</td>
<td>Training on Practices for EMC conformity and electrical safety testing (theory and practice)</td>
<td>Tunisia</td>
<td>TBC</td>
<td>C &amp; I</td>
</tr>
<tr>
<td>6</td>
<td>16/05/2016</td>
<td>18/05/2016</td>
<td>Training on Planning and Deployment of 3G/3G+/4G</td>
<td>Tunisia</td>
<td>Confirmed</td>
<td>New Technologies and BB</td>
</tr>
<tr>
<td>8</td>
<td>03/10/2016</td>
<td>05/10/2016</td>
<td>Training on IPv6 Deployment</td>
<td>Sudan</td>
<td>Confirmed</td>
<td>ICT Applications</td>
</tr>
<tr>
<td>9</td>
<td>06/10/2016</td>
<td>10/10/2016</td>
<td>Training on Broadband policy and implementation</td>
<td>Morocco</td>
<td>TBC</td>
<td>Policy and Regulation</td>
</tr>
<tr>
<td>10</td>
<td>25/10/2106</td>
<td>27/10/2016</td>
<td>TRA-Bahrain, SUDACAD and CIFODECOM workshop on Internet Governance: Technical Prospective</td>
<td>Bahrain</td>
<td>TBC</td>
<td>Internet Governance</td>
</tr>
<tr>
<td>11</td>
<td>07/11/2016</td>
<td>09/11/2016</td>
<td>Training on IoT, M2M and other new ICT applications &amp; services</td>
<td>Sudan</td>
<td>Confirmed</td>
<td>ICT Applications</td>
</tr>
<tr>
<td>12</td>
<td>24/11/2016</td>
<td>26/11/2016</td>
<td>Training on C&amp;I of Mobile Devices</td>
<td>Tunisia</td>
<td>TBC</td>
<td>C &amp; I</td>
</tr>
<tr>
<td>13</td>
<td>01/12/2016</td>
<td>03/12/2016</td>
<td>Training on ICT Applications &amp; Services and their Impact on Health, Safety, Social &amp; Environmental Elements.</td>
<td>Sudan</td>
<td>Confirmed</td>
<td>ICT Applications</td>
</tr>
<tr>
<td>14</td>
<td>07/12/2016</td>
<td>09/12/2016</td>
<td>Training on Planning and Engineering of FTTH</td>
<td>Tunisia</td>
<td>Confirmed</td>
<td>New Technologies and BB</td>
</tr>
<tr>
<td>15</td>
<td>12/12/2016</td>
<td>13/12/2016</td>
<td>Training on Cognitive Radio Networks -CRN</td>
<td>Egypt</td>
<td>Confirmed</td>
<td>Spectrum Management</td>
</tr>
<tr>
<td>16</td>
<td>20/12/2016</td>
<td>22/12/2016</td>
<td>Training on Interconnect cost models</td>
<td>Morocco</td>
<td>TBC</td>
<td>Policy and Regulation</td>
</tr>
</tbody>
</table>
Capacity Development Symposium

A biennial event that brings together high level executives to discuss capacity building issues

When: September 2016

Venue: Kenya

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THANK YOU!

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