



# **Internet of Things Capacity Building and Digital Skills**

**Annual Regional Human Capacity Building  
Workshop for Africa**

**“Developing the ICT ecosystem to harness  
IoT”**



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# AGENDA

- INTRODUCTION
- CoE Strategy
- ITU Academy
- Conclusion

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# ITU HCB

- PTTs/Telcos around the world had their own national training centers in 1980's/1990's
- Reforms in the sector → liberalization, competition, etc. - Training Centre = cost centers
- Regional High Level Training Centre – ITU initiative

AFRALTI (Africa Advanced Level Training  
Telecommunications Institute)

ESMT (École Supérieure Multinationale des  
Télécommunications)

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# ITU HCB

- The CoEs initiative started operating in 2000, and evolved over the years to become one of the ITU's key training delivery mechanisms.
- This project-based initiative witnessed a growth in the number of Centres from two Centres in one region in 2000 to more than 60 Centres worldwide, running an average of 100 training activities per year
- For example, in 2012 alone, over 130 training interventions were organized for approximately 3000 participants.



# CoEs Network



# CoEs Strategy: Review



## Why?

- Changing sector environment
- New capacity building responses

## When?

- WTDC-10
- Resolution 73

## What?

- New CoEs strategy
- Processes and procedures document



# Excellence



# New CoEs Strategy

## THEMES

- Defined by WTDC-14
- 8 themes (including 4 regional)

## VALIDITY

- During 4-years cycle
- In the end of the cycle status will expire

- Maximum 6 CoEs per region

## NUMBER

- Maximum 2 areas per CoE

## PRIORITY AREAS





# Application and Selection

## HOW TO APPLY ?



# Application and Selection: Criteria



## IMAGE-RELATED

Expertise, recognition  
and competence

## EVIDENCE-BASED

Institutional quality and  
performance as  
a training institution

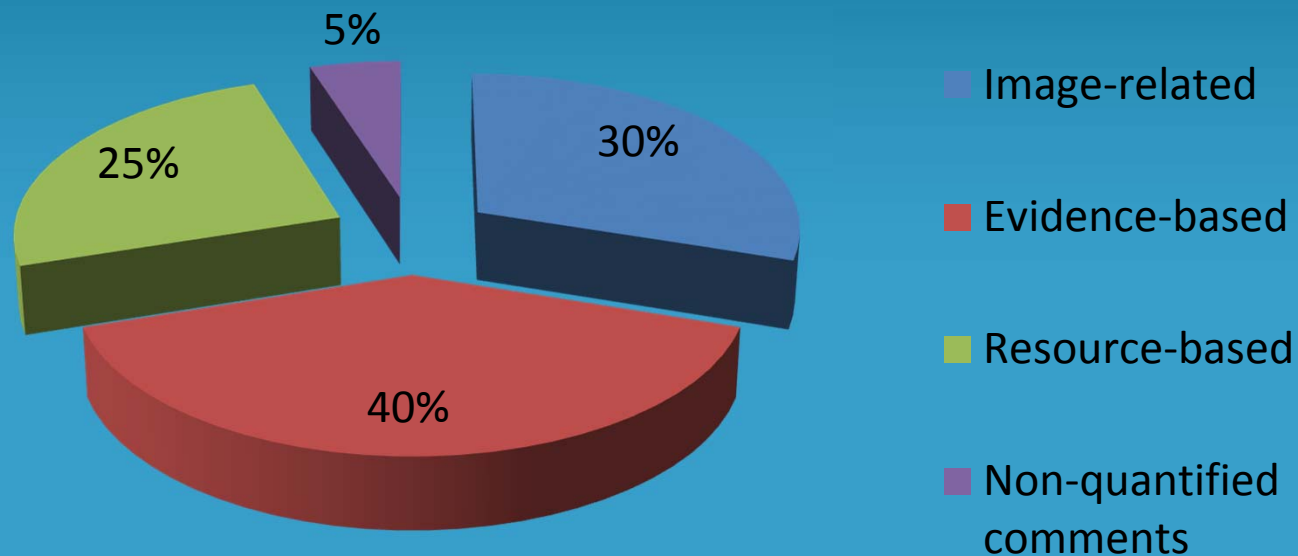
## RESOURCE-BASED

Proposal for  
implementation  
of CoEs activities

a training institution

of CoEs activities

# Application and Selection: Criteria



# Application and Selection: Process


## APPLICATION

- Invitation by the BDT Director after WTDC-14
- Endorsed submitted application form

## EVALUATION

- Based on Processes and Procedures document by the ITU headquarters

## SELECTION

- Considered by GCBI
  - Selected by the BDT Director
  - Endorsed by TDAG
- 
- A faint, stylized globe graphic is visible in the bottom right corner of the slide, showing the Americas.

# Operations of the CoEs



# Operations of the CoEs



# Operations: Partnership

Training delivery partner ←

Content partner →

Funding partner →

Academic partner →



# Partnership: Call for Partners

A vertical timeline diagram on the left side of the slide, consisting of three dark purple circles connected by a thin pink line. Each circle is positioned to the left of a horizontal purple bar containing text.

Launching 4 weeks after selection of the CoEs

Applying by filling a form

Signing partner agreement



# Training Delivery Through Partnerships



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## Some of our Partners



UNITED KINGDOM  
TELECOMMUNICATIONS  
ACADEMY



The Abdus Salam  
International Centre  
for Theoretical Physics



# New Partnerships



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## ITU and AFRALTI

- Spectrum Management

## ITU and ARCTEL

- Management for regulators in ICT

## ITU and DIPLO

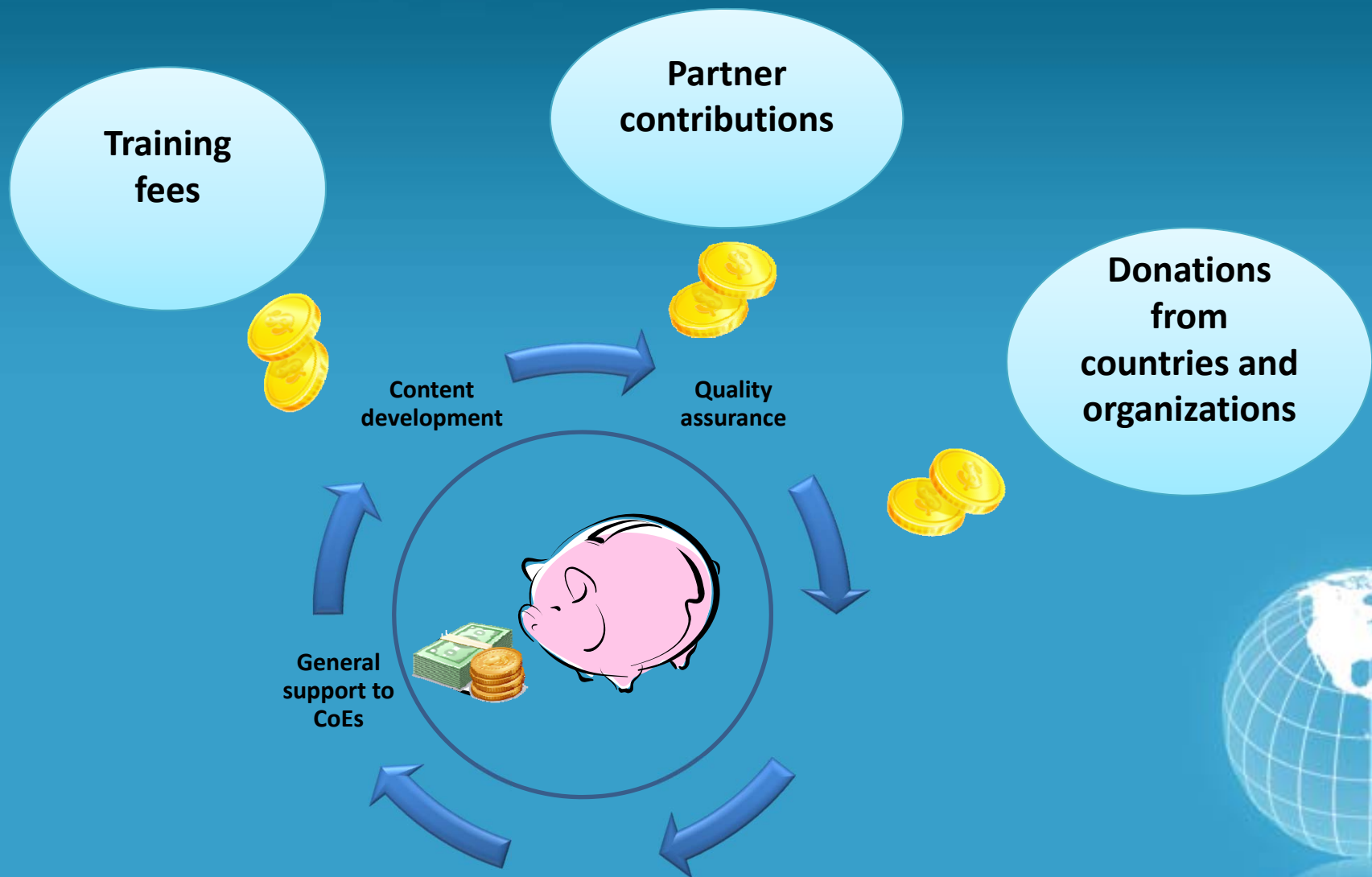
- Internet Governance

## ITU and Cisco (Extension)

- IoT

SMART AFRICA SCHOLARSHIP  
FUND

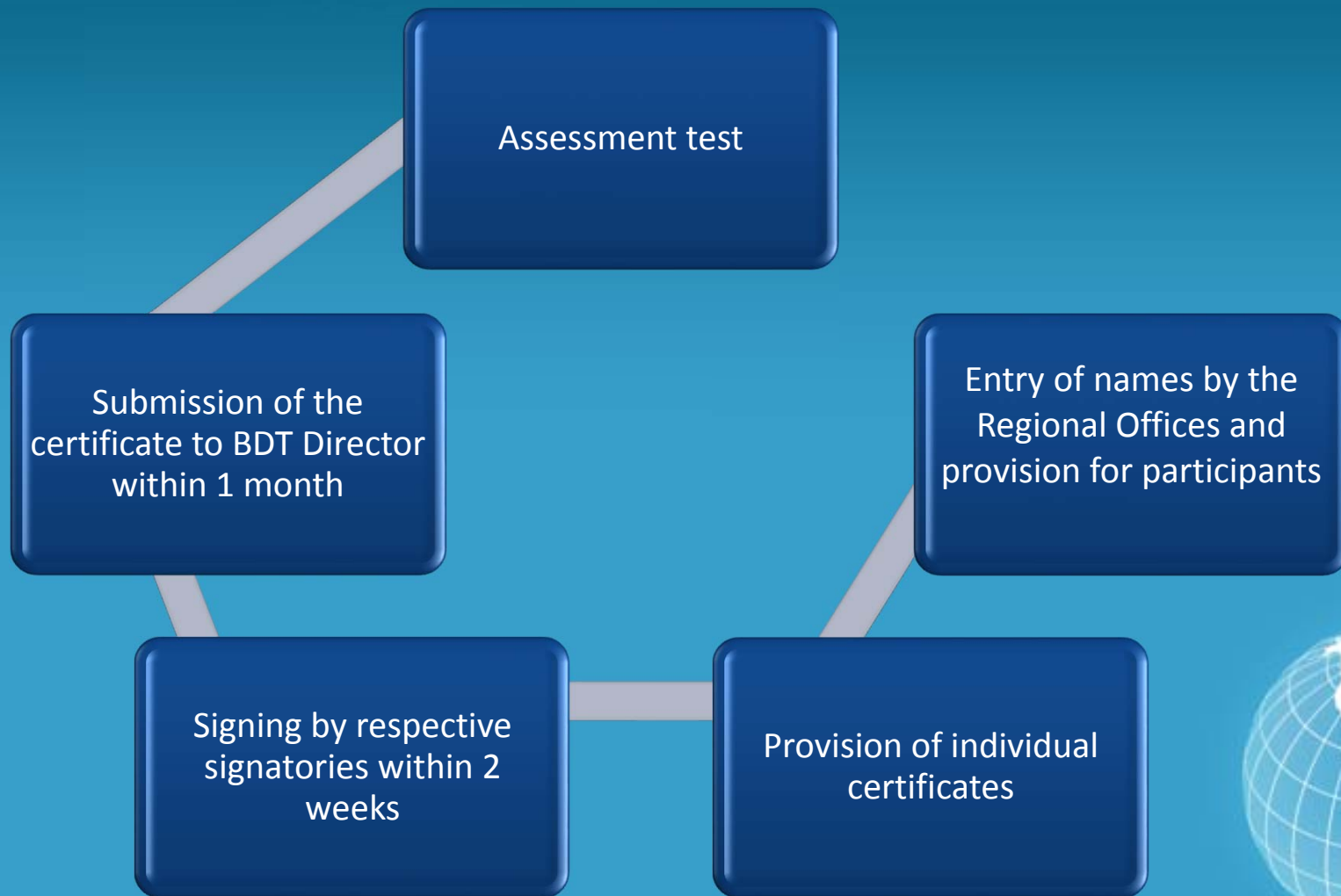
# Operations: Fees and Funding



# Operations: Awarding of Certificates



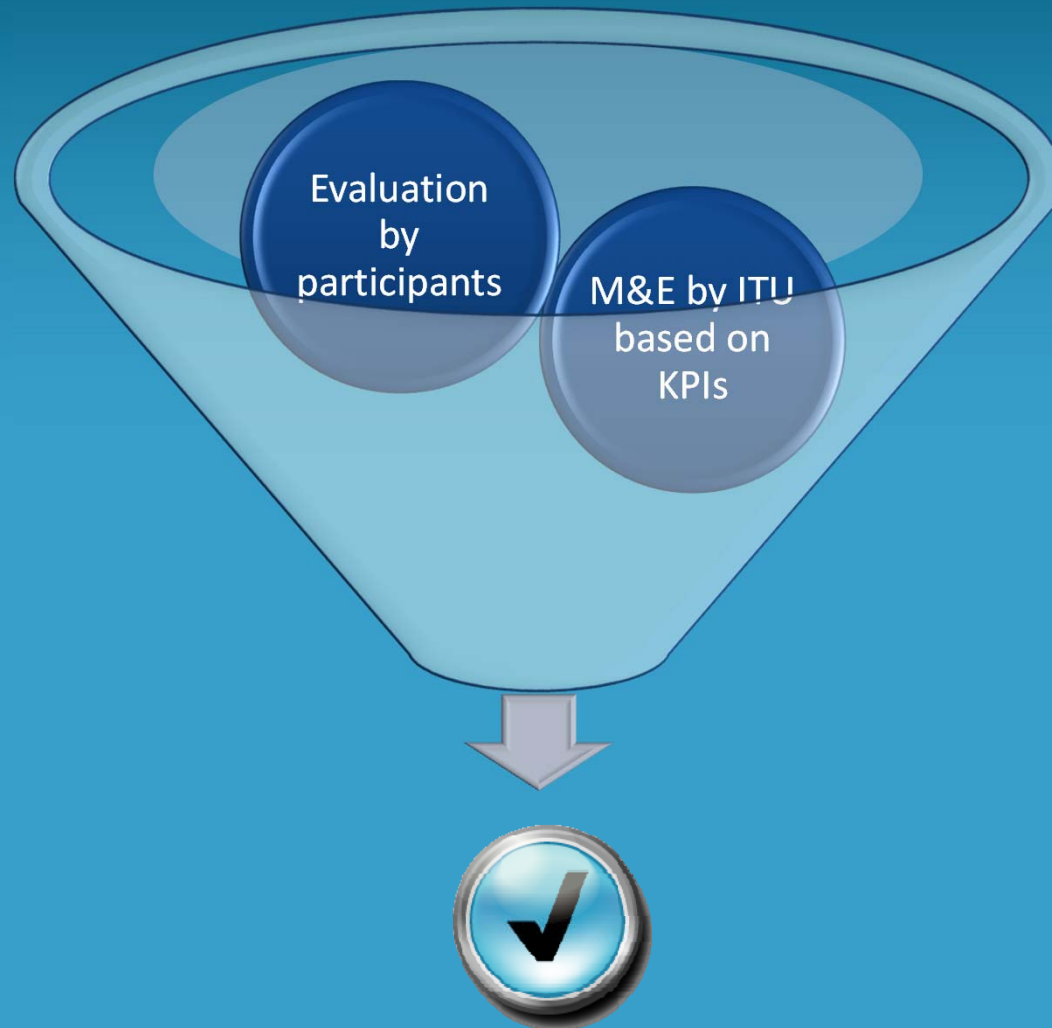
# Operations: Awarding of Certificates



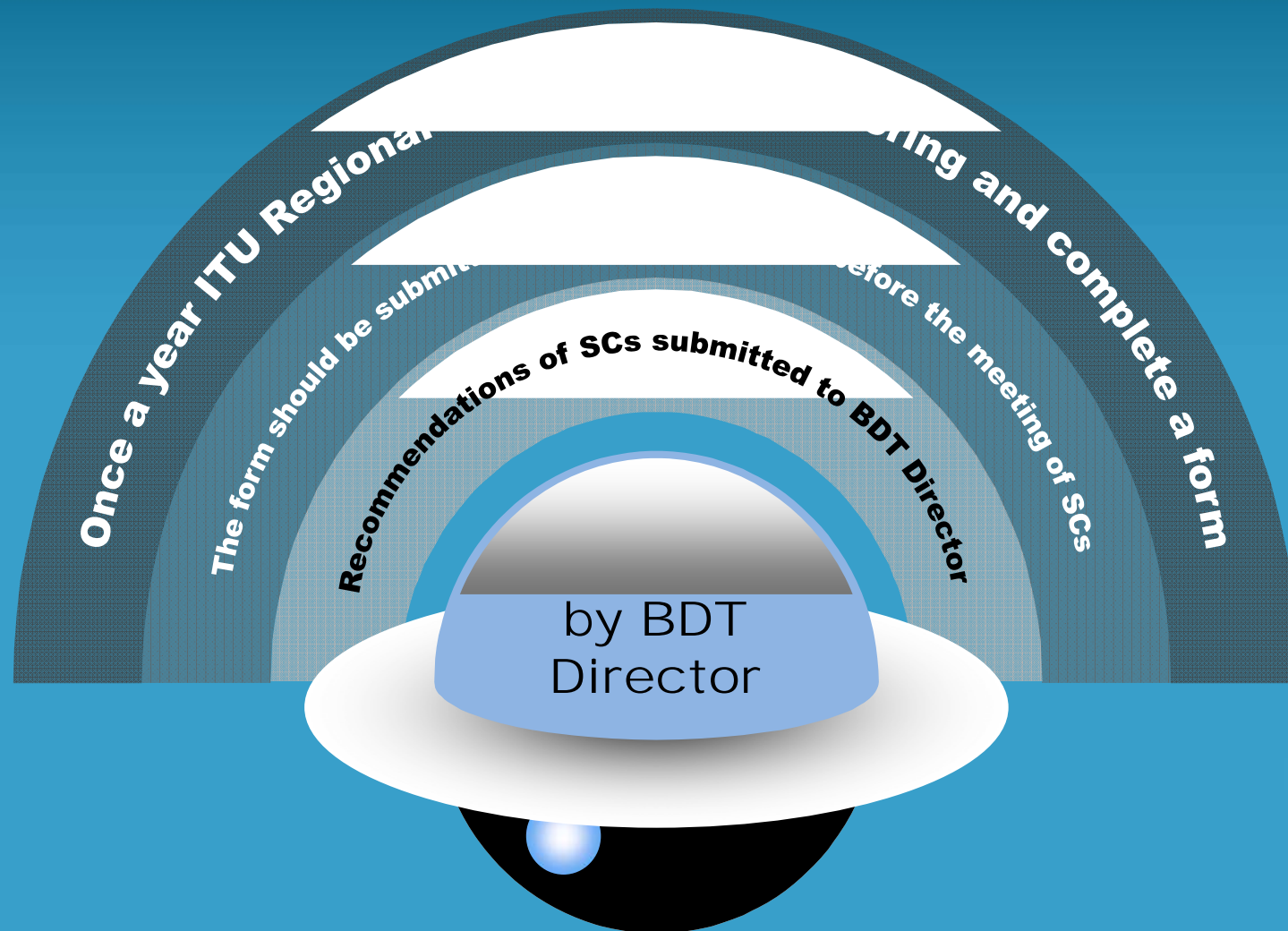
# Monitoring and Evaluation



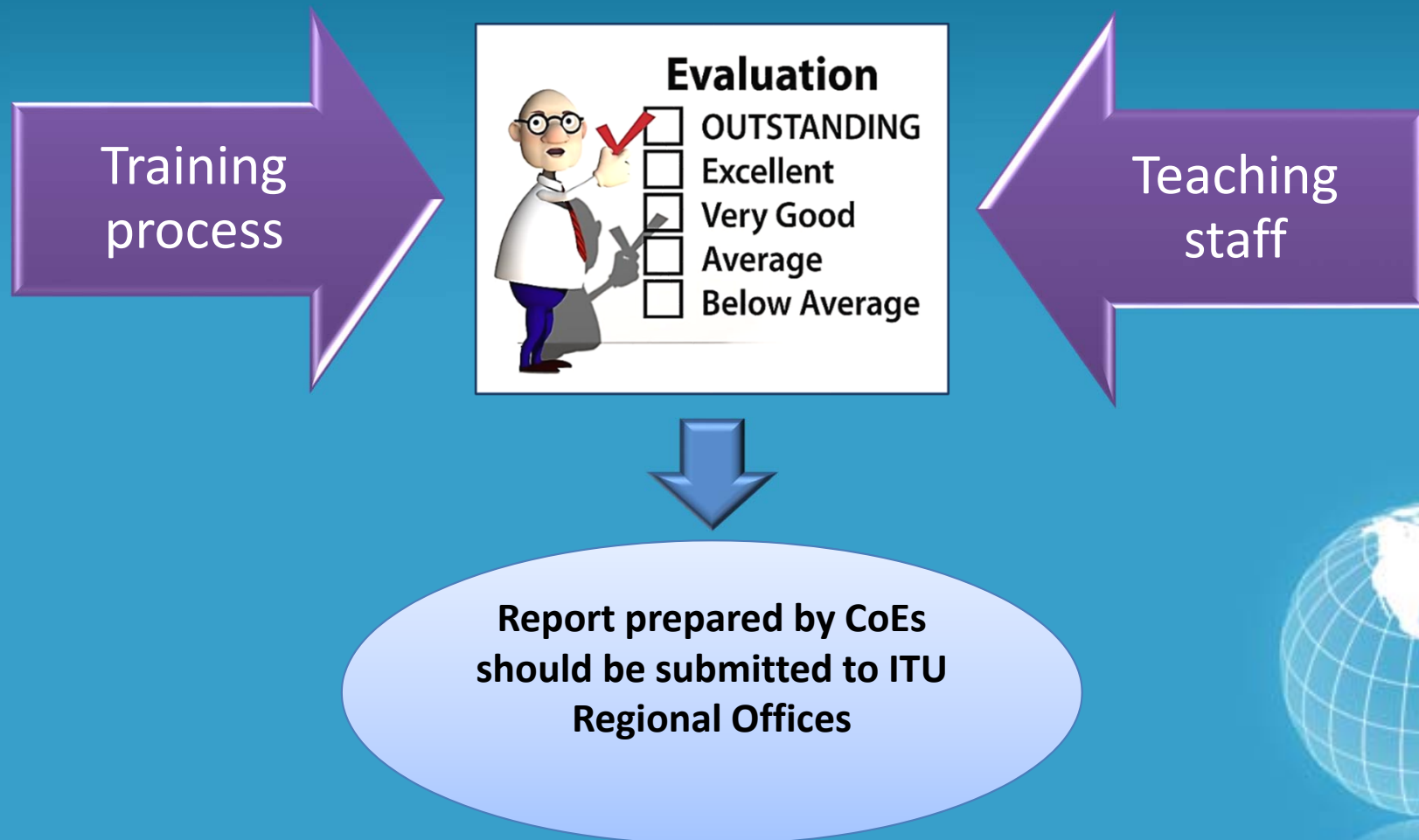
# Monitoring and Evaluation: Process



# Monitoring and Evaluation: CoEs



# Monitoring and Evaluation: Workshop



# Governance



# Governance: SC meetings

A diagram consisting of four interlocking gears of different sizes. The top-left gear is the largest and has a red center. The top-right gear is medium-sized. The bottom-left gear is the largest and has a grey center. The bottom-right gear is the smallest. Each gear contains text.

**SC members  
announced 1 month  
after the CoEs selection**

**Annually  
rotating  
chairmanship**

**ITU is a  
secretariat**

**Meeting – 4<sup>th</sup>  
quarter of the year**

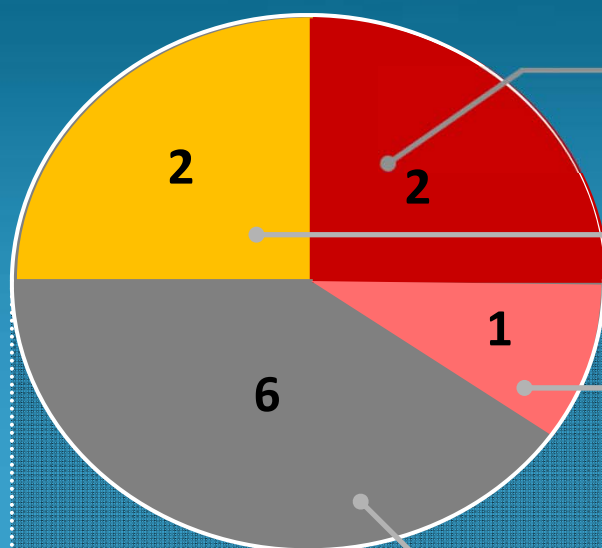
**Every meeting  
includes 2 parts:**

- **General**
- **Decision-making**

**Notice of the meeting shall be sent 2  
months before the meeting.**



# Governance: Steering Committee



Regional representatives of GCBI

Additional representatives from the regional Member States

ITU

Representatives of Member States and Sector Members of the CoEs



# Implementation Timeframe

**Present CoEs continue functioning till 2015**

**Processes and Procedures document will be translated and sent before WTDC-14**

**After WTDC-14 topics will be selected and an invitation to apply will be sent**

**New WTDC cycle will implement the New Strategy**



**NEW CoEs STRATEGY**

# **OPERATIONAL PROCESSES AND PROCEDURES**

**Human Capacity Building Division  
PKM/BDT**



## Centers of Excellence Selected for AFRICA Region for 2015-2016 according to WTDC- 14 -Resolution

#	Priority Areas Recommended	Recommended Institutions	Country
1	Policy and Regulation	Digital Bridge Institute(DBI)	Nigeria
2	Broadband Access & Digital Broadcasting	Ecole Supérieure Multinationale des Télécommunications (E.S.M.T)	Senegal
3	Cyber security	ESATIC	Ivory Coast
4	Cyber security	University of Rwanda, College of Science and Technology	Rwanda
5	ICT Applications and Services	Centre for Learning, Telkom SA	South Africa
6	Broadband Access & Spectrum Management	AFRALTI	Kenya

# ITU CENTRES OF EXCELLENCE AND ITU ACADEMY

A network of over 32 training Centres of Excellence operating across 8 global regions.

- They provide advanced-level technical and managerial programmes.

The benefits of ITU training delivery through Centres of Excellence include:

- Tutor-led courses via the ITU Academy;
- Access to ITU Academy training materials;
- ITU Academy as a medium for capacity-building of managers and engineers, but also other with inter-disciplinary interests in telecommunications/ICT

# ITU ACADEMY

An overview of the ITU Academy and its role in developing and delivering the strategy for ICT human capacity-building



[academy.itu.int](http://academy.itu.int)



# THE CONCEPT



- The ITU Academy has been established as the lead agent for all ITU human capacity-building activities
- ITU Academy responds to demands for knowledge and skills in ICT training, teaching and research.
- ITU Academy offers a wide and growing range of general and specialized courses on all aspects of telecommunications.

# TARGET AUDIENCE



Principally, the programmes serve a varied audience:



Policy-makers

- Telecommunications/ICT business managers and practitioners

Government officials from Ministries of ICT and regulatory authorities

Diplomats and representatives

- Students and teachers of telecommunications/ICT

Civil Society



Content repository  
Delivery of training  
Development of training

ITU- D

ITU- T

ITU- R

ITU Member States and Sector  
Members

## ITU Academy - Training & Events

### Training & Events

#### UPCOMING TRAINING & EVENTS

#### WORKSHOP

#### DISTANCE LEARNING

#### PAST TRAINING & EVENTS

	Code	Title	Region	Country	Start Date
●	14WS13341AFE-E	Wireless Networking for Developing World(WNDW)	AFR	Kenya	27.10.14
●	14WS13346AFE-E	ICT Application Products and Services	AFR	South Africa	21.10.14
●	14WS13353AFR-F	Atelier de formation sur les communications par satellites pour les pays d'Afrique	AFR	Togo	08.09.14
●	14WS13802AFE-E	Workshop on satellites communication	AFR	Rwanda (Republic of)	01.09.14
●	14DL13347AFE-E	Broadband Ecosystem	AFR	South Africa	04.08.14
●	14WS13837ASP-E	Strategic Costing and Quad Play Planning	ASP	Thailand	28.07.14
●	14DL13786AMS-S	IPTV-OTT: fundamentos y panorama actual	MUL	ITU Academy	21.07.14
●	14WS13820ARB-E	Fundamentals of Cloud Computing	ARB	Morocco	16.07.14
●	14WS13652AFR-E	IPv6	AFR	Rwanda (Republic of)	14.07.14
●	14WS13836ASP-E	IPv6 Infrastructure Security (2014)	ASP	Thailand	30.06.14

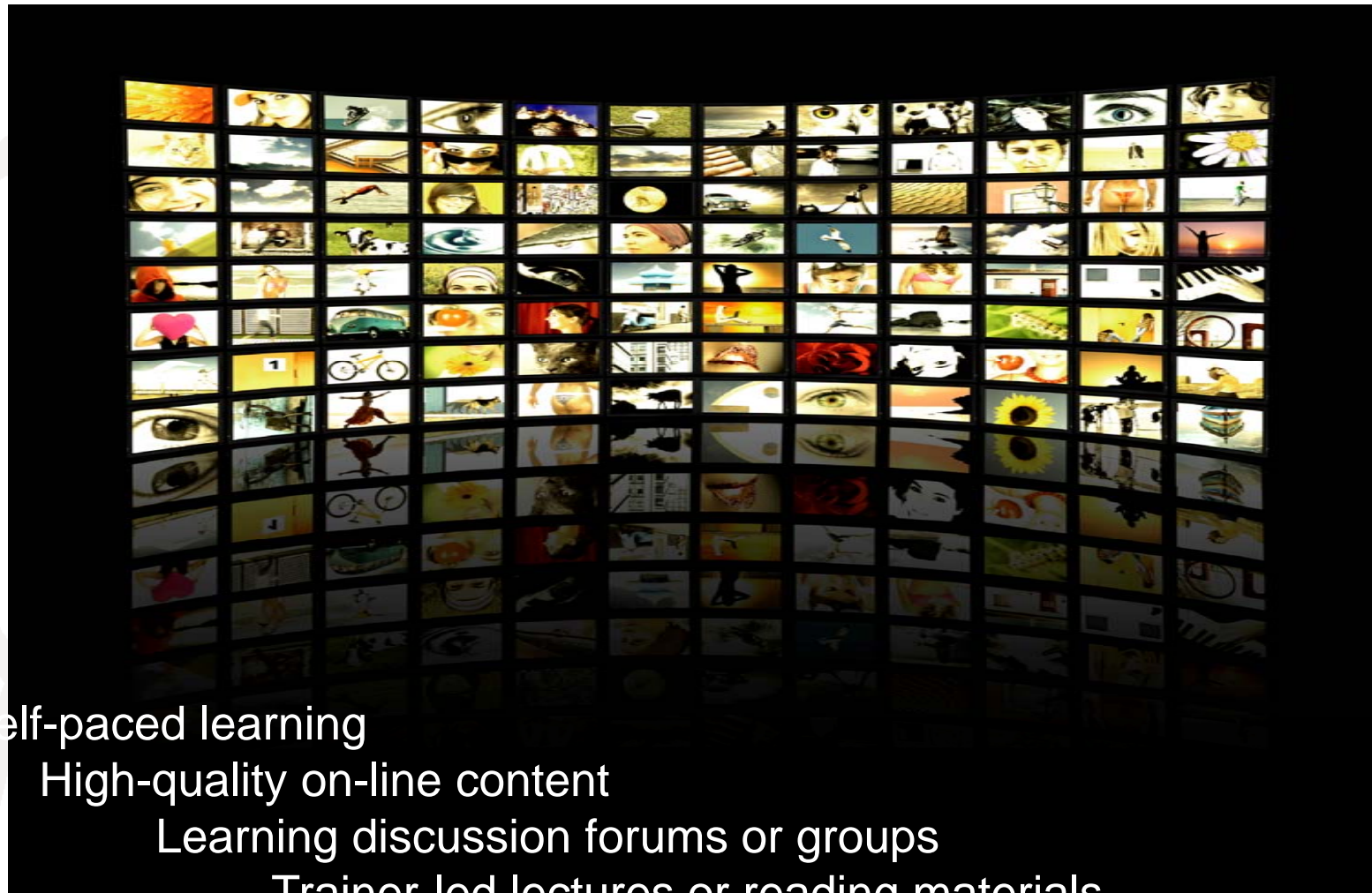


SELECT  
LANGUAGE

 Select Language ▼

HIGHLIGHTS





Self-paced learning

High-quality on-line content

Learning discussion forums or groups

Trainer-led lectures or reading materials

Online attainment testing

Self-paced learning

# REPORT ON THE IOT TRAINING PROGRAMME (IOT TP)



## Foundation IoT Certificate

Overview Module

Introduction to the  
Internet of Things

Standards,  
Architectures and  
Interoperability

Regulation  
Pertaining to the IoT

Design & Functioning  
of Wireless IoT  
Technologies

Physical IoT  
Infrastructure: from  
Devices to Cloud

IoT Data Security,  
Privacy and Trust

Introduction to IoT  
Data Science

Exciting Global IoT  
Use Cases

**Foundational IoT  
Certificate**



COMPULSORY

AT LEAST ONE

# REPORT ON THE IOT TRAINING PROGRAMME (IOT TP)



## ASSESSMENT

### Advanced IoT Certificate

Understanding &  
Designing Sensor  
Electronics

Advanced Wireless  
IoT Design in 5G

Designing &  
Programming of the  
Web of Things

AI and Machine  
Learning for IoT Big  
Data

Social & Ethical  
Implications and  
Case Studies

Business Models  
and Case Study  
Implementations

IoT  
Entrepreneurship

Advanced IoT  
Certificate



**MASTER  
THESIS**

Internet of  
Things MSc.



AT LEAST FOUR ADVANCED MODULES

## CONCLUSION

- CoE is meant to be regional – more local trainees that regional
- Content in the ITU Academy suitable for ONLINE and FACE-TO-FACE courses. In AFR few online
- Reviews ongoing to improve the next cycle.

# THANK YOU!

<http://academy.itu.int>

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Committed to connecting the world