ITU CENTRES OF EXCELLENCE NETWORK FOR THE AFRICA REGION

REPORT OF THE 4TH VIRTUAL STEERING COMMITTEE MEETING

8 DECEMBER 2020

VIRTUAL MEETING

1. INTRODUCTION AND OPENING

The virtual Steering Committee meeting for the ITU Africa Centres of Excellence (CoE) Network was held virtually on 8 December 2020. The meeting was organized by ITU and virtually hosted by the National Computer Board, Mauritius. It was attended by 33 participants including Centres of Excellence (CoEs), representatives of ITU Member states, the ITU Secretariat and other agencies. The list of participants is attached to this report (Annex 1).

Mr. Andrew Rugege, the Director for ITU Regional Office for Africa, in his opening remarks welcomed the participants to the Steering Committee meeting and thanked CoEs and its members for being able to pick up themselves and successfully adapt to the new reality having gone through the most difficult year due to COVID-19 pandemic. He acknowledged that it was a difficult journey to change the way things were being done for a very long time and effectively transition to delivering online courses.

He also talked about what his thinking in terms of transitioning from the status quo (Face-to-face mode of training delivery) that was to the online (e-learning) and digitalization of training courses. He emphasized that CoEs should take advantage of the situation and reach many without necessarily incurring expenses of travelling, by offering courses that are both online self-paced and instructor-led, all the options that come with online courses that have been forced on us by this pandemic.

He mentioned a couple things that he wants the Steering Committee members to put into consideration due to the new reality as they reflect on what CoEs have been able to accomplish in 2020 and solidify the plans for 2021 and going forward:

• **Relevance of the courses:** If our courses were relevant before, are they still relevant with the new reality? Is there something that should change? Is there diversification among the courses that is needed?

• **Current target groups:** Most of CoE courses are targeting people that are already experts which is admirable, as they need to consolidate and improve their expertise but the world is wider now, Africa is wider now, new target groups have emerged.

• **Potential new target groups:** Are we thinking about the young men and women that are going through TVETs for example? What about those that are finishing high school and looking for jobs without having the opportunity to go to the University or don't necessarily want to, is this a possible target group? How many young women and girls actually attend CoE courses? Have we kept those statistics, what can we do about them? Do you have anything for people with disabilities? CoEs should have a marketing strategy to reach out to these groups.

• **CoE outreach activities:** CoEs need to have a strategic marketing plan that reaches out to those their courses are targeting but also to those that can bring their constituency and funding on board such as UN agencies and other umbrella organizations. CoEs need to take advantage of the fact that they are now doing a lot of online courses therefore embrace online marketing and be able to harness it. Partners and beneficiaries of CoEs courses and services should start seeing more value in partnering with Centres of Excellences.

• **Partnerships:** What partnerships can CoEs create collectively but also individually? Are they looking at who else is offering those courses all over the world and think how they can partner with them? Other UN Agencies are getting big into new and emerging technologies and CoEs have to look out for partnerships. What can ITU do to make these partnerships possible?

He urged the Centres of Excellence to take into account these thoughts while at the same time ensuring consistency of quality and relevance of training courses so that CoEs can live up to the expectations of being called Centres of Excellence.

Ms. Susan Teltscher greeted the participants and thanked Mr. Andrew for very important thoughts and comments that will provide stimulation for the meeting discussions and food for thoughts for CoE SC members as they look into the future for the network.

She recalled that the Steering Committee meetings are meant to govern and provide oversight to the CoE network functioning and operations. The SC meeting provides the CoEs the opportunity to present, review and discuss their activities, exchange experiences, learn from each other and strengthen collaboration. She mentioned that the key outcome of the meeting is the agreed training catalogue for the CoE network for 2021.

She also highlighted that this meeting is a mid-cycle meeting as we are at the end of the 2nd year of the 4-year current CoE cycle 2019-2023, therefore the meeting will take stock of the activities that were implemented not only this year but during the first two years. She admitted that it has been a difficult period, 2019 was the 1st year of the new cycle and 2020 was COVID-19 year but that she is very happy to see especially in Africa region the progress that has been made in terms of moving to online delivery of training which is one of the few positive elements that came out of this incredible situation this year.

She also mentioned that due to the virtual nature of this meeting the Agenda was condensed, ITU will provide an overview of the activities and then each CoE will talk about its past and future activities, and in the second part of the meeting, we will have some time to discuss strategic and operational issues related to the implementation of the CoE network activities.

Mr. Adamou Moussa Saley, the Director General of ESMT speaking on behalf of the outgoing chair Dr. Isaac SISSOKO, ARTP-Senegal who was unable to join the meeting due to other commitments, made some opening remarks and highlighted the importance of the meeting as a platform of exchange, consultation and sharing of experiences.

He mentioned that the meeting is going to look into the future direction and how to improve training offer for 2021 after an unusual year that has been affected by COVID-19 and forced us to adapt and reinvent the way we work to meet the needs of students in particular, and our experts, professionals and our governments with of course the strong support of ITU.

He also said that COVID-19 has underscored their ability to innovate to be able to accelerate the digital transformation that is so badly needed, and that the experience gained in 2020 is going to enable CoEs to confront the uncertainties of 2021, use new pedagogical tools that combines in personal and virtual training to be able to fresh out their training offers in key emerging technology areas such as 5G, data, cybersecurity, artificial intelligence among others

He concluded by highlighting that human capital is at the heart of our governments as one of key driving factors of development and asked members of Steering Committee to continue working together to contribute to the human and institutional capacity development in the region.

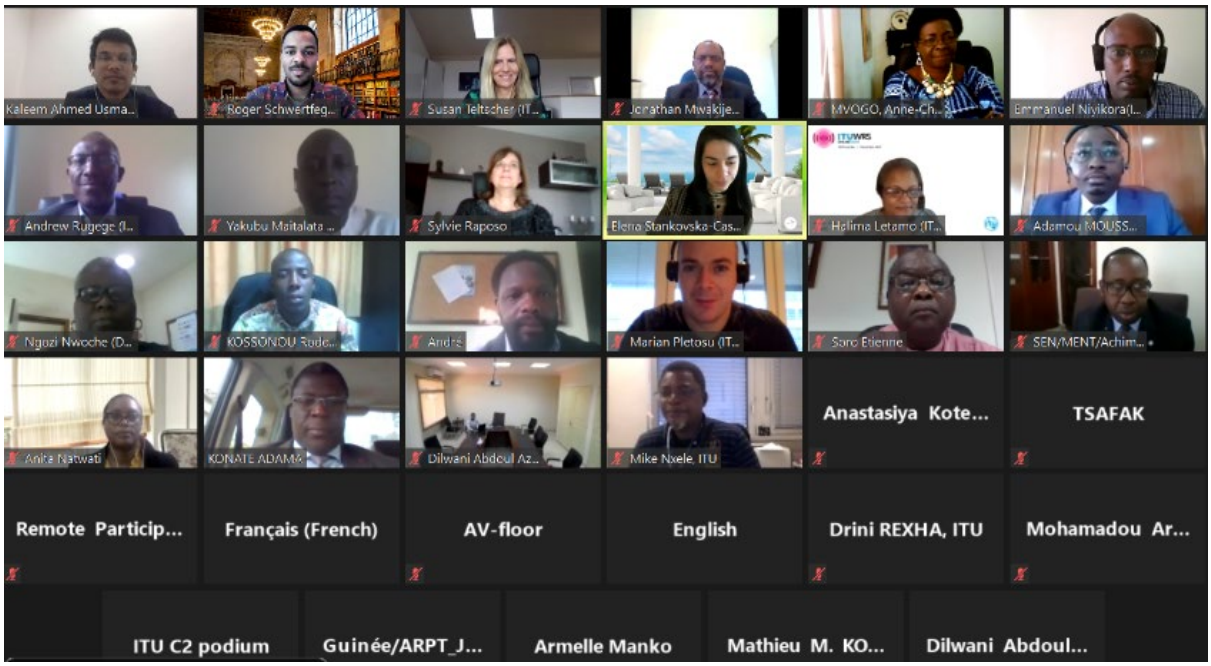
2. CONFIRMATION OF THE COE STEERING COMMITTEE CHAIR

Ms. Susan Teltscher invited the meeting to confirm the new Steering Committee Chair nominated by the virtual host country as per stipulations of the CoE operational guidelines. The meeting confirmed Dr. Kaleem Usmani (Head, CERT-Mauritius) as the new chair of Steering Committee for ITU Centres of Excellence for Africa region for the coming year.

Ms. Susan thanked Dr. Kaleem for agreeing to chair the Steering Committee and she said that she was very confident that he would do a good job.

Dr. Kaleem Usmani, the new chair in his remarks thanked ITU and members of Steering Committee for nominating him to chair the Steering Committee meeting for ITU Centres of Excellence for Africa region.

He highlighted the importance of capacity building for the ICT sector in Africa. He emphasized that capacity building was key as it was becoming very difficult to keep pace with information and communication technologies as well as telecommunication developments, and stressed on the importance of international cooperation. He also thanked CoE for having managed to delivery online courses after COVID-19 has restricted face-to-face trainings which gave them an opportunity to CoEs to reach more participants from different countries.



Mr. Rugege Andrew congratulated Mr. Kaleem for taking over the chairmanship of the Steering Committee for what is going to be a remarkable year and asked him to reach out to his office at any time given the importance of its role. He also thanked Mr. Adamou Moussa Saley for stepping in and filling the gap on behalf the outgoing chair, Dr. Isaac SISSOKO who steered this Steering Committee during the most difficult time.

3. REVIEW OF IMPLEMENTATION OF 2020 ACTIVITIES AND PRESENTATION OF TRAINING PLANS FOR 2021

Presentation by ITU (Regional Office)

Mr. Emmanuel Niyikora, Capacity Development Regional Lead, gave an overview of the training activities implemented by the CoEs in 2019 and 2020. He also mentioned the virtual review meeting that was held in June 2020 to discuss the impact of COVID-19 on the implementation of the training activities and its key outcome which was a revised training catalogue for the 2nd semester of 2020. The presentation covered the following:

• There were 34 trainings planned in 2019, of which 17 were implemented (rate of implementation of 50%)
• In total 273 participants were registered, of whom 238 were certified (certification rate of 87%

• There were 40 trainings planned in 2020, of which 13 were implemented (rate of implementation of 32.5%)

• In total 615 participants were registered, of whom 76 were certified (certification rate of 12.5%)

He highlighted that there was a significant increase in number of participants for online courses but the low certification rate is a major concern, an issue which has to be addressed partly by improving the quality of training delivered online.

Presentations by Centres of Excellence

Centres of Excellence talked about their detailed 2019/2020 activity reports including challenges faced in the implementation of training courses and made some recommendations for improvement, and also presented their training plans for 2021.

African Advanced Level Telecommunications Institute (AFRALTI), Kenya

Mr. Jonathan Mwakijele, Head, Management, Policy and Regulatory Unit, AFRALTI, made a presentation that focused on the courses that were implemented in 2019/2020 and training plan for 2021.

• In 2019, 7 trainings were planned, of which 4 were implemented.
• In 2020, 9 courses were planned, of which 3 courses were implemented (one course was delivered twice)
• Due to COVID-19, courses were reduced to 5 in June and later the 6th course was added.

Implementation status of activities for 2020

S/n	Courses planned	Delivery mode	Original dates	Final dates	Status
1	Digital Broadcasting Content Regulation in a Converged Environment	online	3 - 14Feb20	3-28Aug20	implemented
2	Radio Frequency Spectrum Economy and Market Valuation Based on Digital Dividend (removed mid-June SC meeting)	face-to-face	9-13Mar20		cancelled
3	Digital Broadcasting Masterclass	online	4-8May20	30Nov-24Dec20	cancelled
4	Spectrum Management Masterclass (removed mid-June SC meeting)	online	06-17Jul20		cancelled
5	Radio Frequency Spectrum Economy and Market Valuation	online	07-18Sep20	7Sep-2Oct20	implemented
6	Digital Broadcasting Regulation in a Converged Environment	online	02-13Nov20	2-27Nov20	cancelled
7	Broadcast Spectrum Management	online		5-30Oct20	cancelled

8	Digital Broadcasting Content Regulation in a Converged Environment (removed mid-June SC meeting)	online	05-30Oct20		cancelled
9	Radio Frequency Spectrum Economy and Market Valuation (2nd intake)	online	16Nov-11Dec20		ongoing

Challenges

• AFRALTI had planned to run 6 courses after review in June. Unfortunately, the response from the market was not very positive and that is why they ended up running only three courses.
• Due to Covid-19, no course was conducted in-person, courses were delivered online.
• A number of AFRALTI's instructors including Jonathan himself were well prepared to deliver online training because they benefited from trainings on e-learning organized by ITU.

Training Plan for AFRALTI 2021

S/n	Courses planned	Delivery mode	Date	Training fees (USD)
1	Economic and Market-Based Methods of Radio Frequency Spectrum Management	Online	1st-26th February	531
2	Digital Broadcasting Content Regulation in a Converged IP Environment	Online	1-26 March2021	960
3	Radio Frequency Spectrum Economy and Market Valuation	Online	3-28 May 2021	960
4	Digital Broadcasting Masterclass	Online	7June-2Jul 2021	960
5	Economic and Market-Based Methods of Radio Frequency Spectrum Management	Online	2-27Aug 2021	960
6	Digital Broadcasting Regulation in a Converged IP Environment	Online	6Sept-1 Oct 2021	960
7	Spectrum Management Masterclass	Online	1-26 Nov 2021	960

7 courses are planned for 2021 and the 1st course (Economic and Market-Based Methods of Radio Frequency Spectrum Management will be sponsored by ATU.
• Feedback received from ITU on the 2nd course (Digital Broadcasting Content Regulation in a Converged IP Environment) will be considered and the title will be changed.
• They plan to rerun some courses in 2021 because the demand is still there.
• All courses will be delivered online through ITU Academy platform with 2 live lectures per week of 2hours each through zoom facilitated by the tutor for discussions and lectures.

• All the content, quizzes and assignments are loaded onto the ITU Academy platform and the experience of the past courses has been great.

Discussion arising from AFRALTI's training plan for 2021 presentation covered the following:

Questions	**Responses**
High number of trainings planned for 2021 which are likely not to be implemented looking at the implementation status of 2019 and 2020	Jonathan responded as follows: • 6 courses at least 2 per each quarter were initially planned which they think is manageable given that these are courses that they have been working on in terms of developing content and marketing. • They have been engaging the market and the response and approval for participation from organizations sometimes take time and they are confident that they will have people and organizations that will attend these courses. • The 7th course is being sponsored by ATU and initially they wanted to run it separately but they decided to include it after discussing with ITU. They will partner with ESMT, their experts will translate and deliver the course in French
Does AFRALTI plan to reduce course fees that are still very high?	Jonathan gave following explanations: • This topic has been a subject of discussion during previous SC meetings and the prices were reduced slightly due to courses being offered online • They are hiring external experts to deliver their courses, and for some courses, 2 facilitators or even 3 sometimes are required for one course so it is abit expensive • Most of their courses are delivered to regulators and they need highly qualified tutors and high quality content targeting regulators and it becomes really expensive for them that is why they maintain these prices • Less qualified instructors may compromise the standard of courses delivery.
What is the marketing strategy that was adopted to attract participants from different regions?	Jonathan shared with the meeting the following: • They have strengthened their marketing department, a team of 5 people who are fully involved in marketing, have divided the continent, for each country there is a person engaging the regulator/operators and they have managed to attract participants even from West Africa. • For non-CoE courses such as the Spectrum Management Training Programme(SMTP), they get participants beyond Africa due to a strong marketing strategy and an active team running it.

	• Offering online courses has reduced some direct costs but the duration has increased from one week for Face-to-face to 4 weeks for online courses

Digital Bridge Institute(DBI)

Mr. Yakubu Maitalata, Head of Education & Training Unit gave a brief introduction of the institute and highlighted that the COVID-19 effects were the reasons to why they didn't run any training in 2020.

Implementation status of 2020 activities

S/n	Courses planned	Delivery mode	Original dates	Final dates	Status
1	ICT Applications, Products & Services using Microsoft Office	face-to-face	22-26Jun20		cancelled
2	Social Media Management and Digital Marketing	face-to-face	10-14Aug20		cancelled
3	Developing Web-based Applications	face-to-face	21-25Sep20		cancelled
4	Information and Cybersecurity Principles and Practices	online	05-30Oct20		cancelled
5	Child Online Protection: Consumer Awareness on Cybercrimes	face-to-face	20-21Oct20		cancelled
6	Digital Evidence and Cyber Forensics for Judicial Officers, Investigators, Legal Practitioners & Prosecutors	face-to-face	02-06Nov20		cancelled
7	Emerging Cybercrime Trends: Cybercrime Investigations and Mobile Forensics for Security Intelligence, Investigators and Law Enforcement Officers	face-to-face	09-13Nov20		cancelled

• In 2019, they planned 8 trainings, of which 4 were implemented.
• In 2020, 1st challenge was to transition from face-to-face to online.
• Target audience for online courses were identified and the parent organization, management approved 2 to 3 courses to be converted from face-to-face to online.
• When dates were to be fixed, staff identified to take the online courses, some of them already facing financial challenges due to the pandemic couldn't afford data bundles.
• They did plan to repackage the courses and include the data bundles for participants but it was too late to get their administration's approval.
• The omission of data bundle for the staff to be able to take online courses led to non-implementation of some of their courses and it was a very big lesson for DBI.
• DBI had never been in this situation where they have a zero implementation and they are strategizing for 2021

Strategies going forward based on lessons learnt in 2020

• DBI is now a member of the National Council on Communications and Digital Economy. This implies that DBI will be expected to play more roles nationally and internationally in human capacity building. DBI's funding sources is expected to be diversified to be able to perform additional roles from 2021 and beyond.

Training Plan for DBI 2021

S/n	Courses planned	Delivery mode	Date	Training fees (USD)
1	International Computer Driving License (ICDL) - workforce modules	Blended	26-30 Apr20	250
2	Social Media Management and Digital Marketing	Face-to-face	21-25 Jun20	250
3	Visual Communication and Infographics using Microsoft PowerPoint	Blended	9-13Aug20	250
4	Cyber Forensics and IT Risk Management	Online	11-22Oct20	300
		Face-to-face	25-29Oct20	500
5	Emerging Cybercrime Trends: Cybercrime Investigations and Mobile Forensics for Security Intelligence, Investigators and Law Enforcement Officers	Face-to-face	22-26Nov20	300

• Blended mode of delivery means that the training will be delivered face-to-face and some part of the evaluations/quizzes at the end of the course will be taken online through the ITU Academy platform.
• Under innovation and entrepreneurship thematic priority, they plan to have one course and one organization showed interest. Under cybersecurity, they are planning 2 courses and one of them is attracting participants from the security and law enforcement organizations.

Ecole Nationale Supérieure des Postes, des Télécommunications et des TIC (SUP'PTIC)

Ms. Anne Chantal MVOGO, Chief of Cooperation and Research, presented the implementation status of 2019/2020 activities and the training plan for 2021.

• They planned 5 trainings in 2019, of which 3 were implemented, 2 were not and were rescheduled for 2020

Implementation status of activities for 2020

• They planned 8 trainings in 2020, of which 1 was implemented before COVID-19, 2 successfully delivered online, 1 is ongoing online and 3 were rescheduled for 2021.

S/n	Courses planned	Delivery mode	Original dates	Final dates	Status
1	Qualité d'un système large bande sans fil	Face-to-face	16-20Sept20		Implemented

2	Systèmes de paiement mobile - Transactions électroniques et monétique	face-to-face	07-09APR20	18-20NOV20	cancelled
3	Enjeux techniques et juridiques de la large bande fixe et mobile	online	22-25APR20	10Nov-10Dec20	ongoing
4	Qualité d'un système large bande sans fil	online	22-26JUN20	12-31Aug20	implemented
5	Aspects techniques et juridiques de la création d'entreprises innovantes - Services innovants : Réglementation et Régulation à l'épreuve du numérique	online	08-11SEP20	December	cancelled
6	Gouvernance et sécurité de l'Internet	face-to-face	27-30Oct20	24-27Nov20	cancelled
7	Stratégie numérique et transformation digitale	online	27-29MAY20	30Oct-30Nov20	implemented
8	Blockchain et applications	face-to-face	21-24Jul20		cancelled

• SUP'PTIC delivers courses under 3 thematic priorities: Digital Economy, Innovation and Entrepreneurship, Fixed and wireless broadband.

Problems encountered during 2020:

• Difficulty in organizing trainings in a COVID-19 pandemic context
• Organizations/administrations delaying to register for trainings
• Lack of knowledge to use the ITU Academy Platform especially on online payment

Recommendations

• Another train-the-trainers courses on e-learning and ITU Academy platform is needed.
• Establish a process of assisting participants to use the ITU Academy Platform
• Provision of on-site payment exceptions
• Strengthening and empowering SUP'PTIC CoE
• Strengthening local communication
• Develop partnerships with a possibility of expanding a pool of experts and facilitators
• Provision of preferential prices for students who can't afford prices for organizations
• Delivery of mixed/blended trainings

Training Plan for SUP'PTIC 2021

S/n	Courses planned	Delivery mode	Date	Training fees (USD)
1	Qualité d'un système large bande sans fil	Online	30 Aug - 30 Sept 21	400
2	Les Réseaux d'accès optiques FTTH	Face-to-face	16-19 Feb 21	300
3	Services innovants : Réglementation et Régulation à l'épreuve du numérique	Face-to-face	24 -27 Aug 21	400

4	Transformation et régulation des services financiers :Fondamentaux des microfinances et des Fin Tech	Online	28 Jun-28 Jul 21	400
5	Applications et modèles économiques de la BlockChain	Online	30 March-30 Apr 21	300
6	Transactions électroniques et la Monétique	Online	23-26 Feb 21	400
7	Gouvernance et sécurité de l'internet	Online	19Jan-19 Feb21	400

• Courses planned for 2021 are under 3 thematic priorities: Digital Economy, Innovation and Entrepreneurship, Fixed and wireless broadband.
• They planned 7 trainings in 2021, 3 of them will be delivered face-to-face and 4 online.
• 3 courses are under Digital Economy, 2 under Innovation and Entrepreneurship, and 2 under Fixed and wireless broadband.
• 3 courses were ready to be delivered in December 2020 but were postponed for early 2021 to avoid overlaps between 2020 and 2021. Reason for many courses planned in 2021
• Many courses are planned per request from various local organizations/institutions and SUP'PTIC experts, and they expect to have enough participants

Ecole Supérieure Africaine des Technologies de l'Information et de la Communication (ESATIC), Côte d'Ivoire

Mr. RODOLPHE KOSSONOU**,** Head of training and continuous Education made the presentation of the implementation of activities for 2019/2020 and training plan for 2021.

• 7 courses were planned in 2019 and all of them were implemented.

• Just like other CoEs, training activities for 2020 were heavily affected by the COVID-19

Implementation status of activities for 2020

S/n	Courses planned	Delivery mode	Original dates	Final dates	Status
1	Management de la sécurité des systèmes d'information (norme ISO/IEC 27001: lead Implémenter	face-to-face	24-28Feb20		implemented
2	Conception des réseaux d'accès optiques	online	23-24Mar20	16NOV-12DEC20	cancelled
3	Comprendre l'Internet des Objets (IoT)	online	20-24Apr20	5-31OCT20	cancelled
4	Sécurité des applications d'internet et de mobile Banking	online	25-29May20	2-28NOV20	cancelled
5	Evolution vers la 5G: principes techniques et nouvelles opportunités économiques	online	22-26Jun20	28SEP-24OCT20	cancelled
6	Les systèmes embarqués pour l'IoT	online	20-24Jul20	23Nov - 19Dec20	cancelled
7	Protection des données à caractère personnel	online	01-28Sep20	16-28 Nov20	implemented

• They initially planned 6 courses face-to-face in 2020, one was implemented before COVID-19 and others were converted into online courses but unfortunately due to lack of participants they did not implement them.
• One course initially planned to be delivered online was implemented with 4 participants

Recommendations

• ITU to organize another train-the-trainers course on e-learning in French
• Translation of training materials for the train-the-trainers course on e-learning to French.

Review of 2020 training activities - some statistics

• Training delivery rate: 2/7 or 28.6%; overall participation rate: 18/150 or 12%
• Women participation rate: 4/18 or 22,22%; Number of international participants: 04/18 or 12,84%; Average training satisfaction rate: 91.1%
• Issuance of training certificates by ITU: 14/14 (1st training course)

Training Plan for ESATIC 2021

No	Training course topic	Mode of Training	Dates	Price
1	Gestion des risques liés à la sécurité de l'information	Face-to-face	10-12 Mar21	560 USD
2	Sécurité du cloud	Face-to-face	03-07 May21	930 USD
3	Sécurité des applications des services bancaires	Face-to-face	07-11 June21	930 USD
4	La Protection des données à caractère personnel	Online	06-20 Sept21	280 USD
5	Conception des réseaux d'accès Optiques	Face-to-face	22-26 Mar21	930 USD
6	5G: Technologies et opportunités économiques	Online	06-10 Sept21	280 USD
7	Comprendre l'Internet des Objets (IoT): Principes, Normes, Ecosystème et opportunités économiques	Face-to-face	19-23 April21	930 USD
8	Les Systèmes embarqués pour IoT	Face-to-face	19 -23 July21	930 USD

• They are planning 8 courses for 2021, 4 under cybersecurity thematic priority, 2 under Fixed and wireless broadband, and 2 under Internet of Things.
• 6 courses will be delivered face-to-face and 2 online
• Courses are planned based on regular consultations with private and ICT sector.
• Courses are also planned based on recommendations made by current and previous participants, also based on challenges observed locally and at regional level.

Strategies for achieving 2021 training objectives:

• Communication

- Professional local and international networks (UNETEL, GOTIC, Club of DSI,);
- Media, posters, leaflets and prospectus;

- Social media
- Couriers (ITU and ESATIC)

• Field actions

- Prospecting and companies/institutions/organizations visits;
- Participating in conferences and specialized exhibitions in the ICT sector;

• Taking into account the current needs of the ICT sector and potential customers.

Discussion arising from ESATIC's training plan for 2021 presentation covered the following:

Question	Responses
Is ESATIC considering moving some the courses planned early in 2021 to online due to uncertain COVID-19 situation given that ITU recommends to deliver online training until COVID-19 situation changes,	Mr. Adama Konate responded as follows: • These trainings have been planned to take place face-to-face but it is possible that many of them will be delivered online if they can reach an agreement with the organizations/operators that they have been prospecting and engaging. • The first engagements made with organizations and private sector have rather preferred training in a hotel setup instead of training within their premises, • Last year, ESATIC was able to conduct other non-ITU training courses in hotel structures with training rooms arranged in accordance with COVID-19 established guidelines. • It was ESATIC's first time to launch online trainings, and they had difficulties in promoting them within such a short period unlike other courses they usually schedule/plan a year ahead. • Over the past 6 years, ESATIC has been able to deliver all its training programmes because they are discussed in advance with target audience. • Last year things did not go well in Côte d'Ivoire besides COVID-19, it was an election year and it was difficult

Ecole Supérieure Multinationale des Télécommunications (ESMT), Senegal

Dr. André ONANA, the Chief of ESMT Management Department presented the implementation status of activities for 2019/2020 et plan de formation 2021.

- They had planned 6 courses in 2019, of which 2 were implemented

Implementation status of activities for 2020

S/n	Courses planned	Delivery mode	Original dates	Final dates	Status
1	Montage et configuration d'équipements TNT	face-to-face	9-13MAR20		cancelled

2	Télévision Numérique Terrestre (TNT) et Informatique de l'audiovisuel: production, transport et diffusion	online	13-17APR20	27JUL-29AUG20	implemented
3	Management de projet: approches prédictives et agiles	online	20APR-22MAY20		cancelled
4	Régulation des services financiers digitaux et des FinTechs	online	15-19JUN20 5-31OCT20	30NOV-26DEC20	implemented
5	Gestion avancée du spectre pour la 5G	face-to-face	13-17JUL20	28-31DEC20	cancelled
6	Applications et modèles économiques de la Blockchain	face-to-face	26-30OCT20	28-31DEC20	upcoming
7	Nouveaux enjeux en gestion et contrôle du spectre	online	30NOV-18DEC20	30NOV-26DEC20	ongoing

• ESMT had an ambitious plan for 2020 because 2019 was a difficult year for them.
• They planned to run 7 courses in 2020, of which 4 were to be implemented.
• They had decided to relocate some courses, training on « *Installation and configuration of TNT equipment* » was planned to take place in Niger. Everything was going well until the pandemic stopped all travels.
• During the 3rd virtual SC meeting in June, they reorganized their training plan around 4 courses, one has already taken place, 2 are ongoing and the last course will take place face-to-face end of December.
• The training on « *Montage et configuration d'équipements TNT* » is very interesting but requires practical work and cannot be done entirely online.
• Online trainings opened opportunities to reach many customer segments beyond Senegal.
• Of the 4 courses that were planned post-COVID-19, 3 have been implemented online and one will be delivered face-to-face end December by request of an organization, and ITU was informed of the change
• They can say that for their post-COVID plan, they are in a satisfactory situation.

Challenges and recommendations

• **Technical:** Equipment and software applications to develop online training content

• **Human resources:**

- Capacity building of trainers in the design and dissemination of online courses;
- Capacity building of trainers in computer infographics (creation interactive course materials such as videos, etc.)

• **Pedagogical:** The reliability of evaluations and availability of a proctoring tool (a tool used to supervise online evaluations, guaranteeing the quality of the evaluation process without requiring the physical presence of either the student or teacher in any specific place.

Training Plan for ESMT 2021

No	Training course topic	Mode of Training	Dates	Price
1	Informatique de l'audiovisuel : Transport, virtualisation et stockage	Blended	08Mar-3Apr21	850 USD

2	Régulation des services financiers digitaux et des FinTechs	Online	03-29May21	400 USD
3	TNT : Les aspects techniques, planification et services	Face-to-face	21-25June21	850 USD
4	Gestion avancée du spectre pour la 5G	Face-to-face	12-16July21	850 USD
5	Management de projets digitaux : approches waterfall et agile (SCRUM)	Online	05Jul-07Aug21	600 USD
6	Montage et configuration d'équipements TNT	Face-to-face	11-15Oct21	850 USD
7	Applications et modèles économiques de la Blockchain	Face-to-face	20-24 avril 2021	400 USD

• Given that the pandemic disrupted their 2020 training plan, they have not changed much between the plan for 2020 and 2021.
• Their 2021 training plan has 7 courses as they had planned in 2020.

Discussion arising from ESMT's training plan for 2021 presentation covered the following:

Questions	**Responses**
Dr. André Onana (ESMT) and YAKUBU(DBI) asked if and when certificates for the Train-the-trainers course on e-learning will be issued.	• Elena responded that they are finalizing the review of the course delivery and participants will soon be informed.
ESMT asked if they can have access to a newsletter published by the ITU Area Office for West Africa so that they can promote their courses in the region through it	• The ITU Area office for West Africa do not have a newsletter, ITU has News Magazine and the ITU team will see if it might be the best platform to promote CoE courses in the region and communicate to CoEs
SUP'PTIC asked about Mode of delivery of courses. Like other CoEs, they have structures/organizations that are requesting face-to-face courses and they wanted to know if they can consider this request or if the same course could be delivered both online and face-to-face.	Dr. Andre Onana shared following ESMT experiences: • They are also confronted with this problem, when they run the course on TNT, in the evaluation report, they had some remarks that the course had certain practical parts that required physical presence to do them. • They are working on acquiring simulators to be able to conduct virtual practical sessions, and this is also the reason for one of their recommendations that ITU should perhaps look into supporting them in terms of acquiring these simulators.

	• If they can manage to get simulators, it can effectively solve the problem of some modules that cannot be done practically online. Mr. Saley/DG ESMT, gave following additional comments: • In a field as relevant as telecommunications and ICTs, many new topics that they address are cutting-edge and new technologies that certainly requires theory but participants expect more from them in terms of practical and hands-on sessions. • He mentioned that he practically agrees with Ms. Susan on switching to online if possible, but that they need support from ITU to ensure quality of courses that requires practical sessions. • Until they are equipped with these simulators and infrastructure to carry out these courses online, in the meantime they will be doing blended, theoretical training online and practical training if possible face-to-face Halima Letamo, Capacity & Skills Development Officer/ITU reiterate following points: • There is need to understand that courses designed for face-to-face when they are proposed to run online, there is need for conversion of face to face materials to be able to suit online learning if we are to attain the level of quality we wish participants to get. • On the issue of simulations for purposes of practical sessions, she said that it probably needs to be discussed going forward because this will help close that gap. Simulators are still very expensive and we have to be realistic what we can do in the meantime while we are still having conversations around acquiring those simulators to be able to run practical elements of our courses that we would otherwise run face to face. • She also mentioned that some CoEs are having challenges with laboratories even if they are to run the courses face to face. There is a need to have discussions where CoEs say that they have trainings that need practical elements and they need a laboratory to run this particular course, bringing all that online would require additional resources in terms of getting simulators, connecting and integrating them to the online system and training individuals to be able to run the simulations online

SUP'PTIC also asked if it is possible to allow students who want to participate in CoE courses to pay preferential/discounted prices, because they cannot charge them the same price as organizations/administrations	Dr. Andre Onana shared following ESMT best practices: • He said that they are also facing this problem, there a lot of students at ESMT who want to attend CoE courses but they can't afford them. • ESMT has decided to cover part of their training costs, therefore ESMT subsidizes students to be able to take these courses, this is the model they have set up to support students and their staff. • The model has been adopted by ESMT to support students to participate in CoE courses on new technology topics. This is for example what they are going to do with the upcoming Blockchain course. 10 students will attend it at a subsidized rate because ESMT will pay the difference • Mr. Adamou Moussa Saley/DG ESMT added that all the efforts made internally at ESMT regarding the strategy to facilitate those who do not have the means to benefit from high-level courses, have provided opportunities to their students to participate in these ITU courses which creates satisfaction and enthusiasm within the ESMT • Sylvie RAPOSO, Capacity Development Admin. Coordinator/ITU, responded to this issue that discounted/preferential prices are allowed provided that it is communicated to ITU and documented in the course and financial reports

Mr. Adamou Moussa Saley/DG ESMT took the opportunity to thank AFRALTI for the commendable initiative which is very important in the era of covid and even beyond. CoEs have different expertise and working together can only make them successful in their mission and be able to deliver high quality courses. He further mentioned that this is one of the advantages that this meeting and working group can bring them and encouraged other CoEs to reach out to ESMT for any potential opportunity for cooperation.

He also thanked ITU for the 2 train-the-trainers courses on e-learning that ESMT and other CoEs have greatly benefited.

He stated that they want to deliver courses in emerging and advanced technologies such as artificial intelligence and blockchain among others but knowledge in their technical aspects is still lacking within Centres of Excellence for Africa region. He also said that a train-the-trainers course in English and French organized by ITU in consultation with CoEs in some of these new and advanced technology topics will be welcome.

National Computer Board (NCB), Ile Mauritius

Dr Kaleem Usmani, Head of Computer Emergency Response Team of Mauritius (CERT-MU) made the presentation of 2019/2020 activities and training plan 2021.

In 2019, NCB did not deliver any training due to various reasons

Implementation status of activities for 2020

S/n	Courses planned	Delivery mode	Original dates	Final dates	Status
1	Cybersecurity Risk Management	online	30-31Mar20	28-30Sep20	implemented
2	Cybersecurity Policy and Strategy	online	Quarter 3 2020	25-27Nov20	implemented

- They delivered 2 training courses online and free of charge
- Both courses attracted high number of registrations from Africa region and beyond
- But there was a low number of certified participants, 31 for the 1st and 74 for the 2nd training.
- These courses were delivered by CERT-Mauritius under NCB using in-house trainers

Training Plan for NCB 2021

No	Training course topic	Mode of Training	Dates	Price
1	Cyber Disaster Response: Development of Simulation Exercises	Online	April 2021	Free of charge
2	An Introduction to Developing National Cyber Emergency Response Plans	Online	August 2021	Free of charge
3	Building an effective cybersecurity team	Online	November 2021	Free of charge

- They are planning to deliver 3 training courses in 2021, one each quarter
- The feedback received from ITU on their sequencing will be taken into consideration
- They are devising strategies on how practical course elements will be handled for example by using open source software applications.

Discussion arising from NCB's training plan for 2021 presentation covered the following

Questions	**Responses**
It is observed not only in Africa but also in other regions that courses offered free of charge attract many registrations but eventually a low number of participants show up and go through the training, and a very low number are getting certified. What is NCB planning to address that?	Mr. Kaleem gave following observations based on their lessons learnt: • Firstly, it is due to late confirmation of participants which was done one day before for their 1st training, if confirmation of participants is done ahead of time, it allows them to get prepared for the course, and secondly it was due to different time zones, free courses generate interest for participants from all parts of the world. It is difficult for participants from say the Latin America and Asian Pacific to take part in their trainings despite being registered and interested.

	• Timely confirmation of participants led to an increase of certified participants for the 2nd course compared to the first. • They will do an assessment and some trainings could be charged in the future.
What was the impact of the Covid-19 on other centers of excellence in other regions?	Ms. Susan responded as follows: • There was an impact on all regions because it was a major disruption, the impact has been different for different CoEs but also for different regions. • Some CoEs that have been delivering online trainings all along were less impacted in terms of changing from face to face to online because there were already delivering trainings online, some of them had high increase in participation. • Some regions like the Americas had online courses, but some of their clients struggled for financial reasons so there was less activities there. • In Africa where most CoEs deliver face to face trainings the impact was heavy because of that. • The share of face to face courses is lower in other regions from that perspective Africa was more impacted than others. • Overall speaking, requests for online courses have increased and ITU Academy users have almost doubled from 10 last year to 20 thousand users this year and it is linked to that

Wrap up and takeaways from CoE presentations

• CoE were unable to deliver many courses planned for 2020 due to COVID-19,
• CoEs experienced technical and operational difficulties when they were forced to transition from face-to-face to online courses,
• University students and CoE staff cannot afford the fees charged for CoE courses, some CoEs are offering discounted prices for them to be able to participate,
• CoEs and participants are having difficulties in using the ITU Academy platform,
• CoEs are lacking qualified trainers/experts in new and advanced technology topics.

Recommendations

• Given that we were at mid-cycle of 4-year cycle 2019-2023, there is a need to think where the CoE network in the region stands now and what can be done so that the following 2 years CoE can have a better implementation rate in terms of the number and quality of courses planned through this network,
• CoE were encouraged to think about a good strategic marketing plan that can lead to delivery of all planned courses,
• CoE were advised to focus on few courses and ensure they are implemented rather than having many courses that they may not be able to implement because the COVID-19 is still evolving and it is not over yet,
• CoE were encouraged to do as many trainings as possible online which also can bring the fees down and give opportunities to many participants to take their courses, and also use in-house trainers if possible to reduce the cost of courses,

• CoE were asked to communicate regularly with ITU team and raise issues on time
• ITU was requested to continue supporting CoE as they have been doing.

Implementation of CoE training activities 2020 and list of CoE training courses for 2021 are attached as Annex 2 and Annex 3 respectively

4. STRATEGIC AND OPERATIONAL ISSUES RELATED TO THE IMPLEMENTATION OF THE CoE NETWORK ACTIVITIES

The chair gave the flow to Ms. Susan to present some strategic and operational issues related to the implementation of the CoE network activities

Feasibility study on establishing an ITU training institute

This topic was already introduced at the last mid-year Steering Committee meeting. This is a study was initiated at ITU Council in June 2019 and has been carried out this year to consider setting up an ITU training institute.

Elements covered in the study are: stocktaking of existing capacity development activities provided by ITU, identifying existing gaps and areas of improvement, assessing demand for a new training institute, developing resource requirements and governance structure for the new training institute, exploring and presenting alternative options to improve ITU's work on capacity development and the report will include recommendations.

This is shared with CoEs because some recommendations will be made with respect to CoE programme and how it should evolve in the future.

Discussion arising after the presentation on the feasibility study covered the following:

Questions	**Responses**
Will this training institute that is going to be established replace the Centres of Excellence in terms of capacity building?	Ms. Susan answered that it is a feasibility study to explore and look at the feasibility, if that institute can be setup or not. For now, there is no decision that has been taken yet on this.
What will be the business models of this institute compared to the existing CoE programme?	Ms. Susan responded that they are also curious to see what comes out of the proposal, a business plan is also part of the study along with the budget. A report with recommendations will be presented at the ITU Council next year and then there will be a discussion and decision taken how to move forward.
Will this training institute practically bring to an end the CoEs as they are at the moment?	• Ms. Susan responded that they also have questions on what could be the implications but that this is too early to discuss as it is not yet known what will be the main recommendations and if it is feasible setting up such an institute. • She however mentioned that there is need to focus on doing justice to the name of Centres of Excellence network and focus on ensuring high quality of trainings being implemented and a good strategy to continue over the next couple of years

Quality assurance process on training content

Ms. Susan presented a quality assurance process that is being adopted internally for the development and/or checking of training materials to assure quality of the training material that is being delivered under ITU's name and according to ITU's mandate.

• The process for developing/checking CoE training plans and training materials entails that CoEs are expected to submit their draft training plans to the ITU CD Thematic Priority (TP) Regional Lead two months before the date of the Steering Committee meeting. Each course must be accompanied by a detailed course description showing the objectives of the course, the topics to be covered and the learning outcomes.

• The CD Thematic Priority (TP) Regional Lead submits the course description to the respective Thematic Priority Coordinators leading the topic for their review and feedback.

• Thematic Priority Coordinators can propose to CoEs subtopics within the priority areas for which the CoEs were selected and would like CoEs to deliver courses on, including areas that the CoEs may not have indicated in their training plans.

Discussion arising after the presentation on quality assurance covered the following:

Questions	**Responses**
Now that we are migrating from face to face to online, how do we monitor to ensure that people that are taking the evaluations are the real participants that have registered for the course not somebody else taking them on behalf of the registered participants? what is ITU putting in place, because with quality training materials, you also need to ensure quality assurance for evaluations?	Ms. Elena responded as follows: • Evaluations are necessary for certifications however final evaluation is not the only components that is evaluated, there are discussion forums, quizzes, participation and other assignments activities that are also part of course evaluations and would be very difficult to be taken and completed by an other people other than the registered participants, • Secondly, there is also an anti-plagiarism tool for those who have assignments that need to be evaluated. There are also different types of quizzes that have functions that will make them difficult to be completed by a robot or a person not participating in the course. • ITU is also looking into purchasing a licensed proctor tool which is one way of ensuring that a person that sits for the exam is the person that paid for the course but you cannot really be 100% sure that a person sitting behind a computer is the person that paid for the course and is the person sitting for the evaluations, it is not 100% sure to avoid cheating.

	• Halima added that the process that Susan was presenting is speaking specifically to the quality during the development process and question is on quality of evaluations, they 2 different processes, one is quality of training content and other one is on training delivery but they are both important

Participation of ITU staff in CoE courses

Ms. Susan stated that there has been requests internally from ITU colleagues and from management asking if ITU staff can participate in courses delivered by CoEs, the question to CoEs in Africa region is whether it is agreeable for 1 or 2 ITU staff to participate in some of CoEs course at no cost. However, this is a discussion about the principle and so far CoEs from other regions replied positively. This can be a win-win situation as ITU staff can follow more closely how CoE courses are implemented and CoEs can also have ITU colleagues who are knowledgeable in the topics they are delivering.

In general, CoEs responded positively that this is a good initiative that can bring quality into the training apart from learning and that they would be happy to have one ITU staff participate and do all assessments for certifications just like any other participants.

However, there was also a call for ITU to go beyond and make all the expertise available in terms of experts who could be involved in the CoE training delivery process, for CoEs to be able to call on them to improve quality of training delivered.

Organization of a global meeting for all Centres of Excellence

Ms. Susan informed CoEs that as requested during previous the Steering Committee meetings, ITU is planning a virtual global meeting that will bring together all CoEs from all regions to exchange their experiences, discuss certain topics of common interest. This global CoEs meeting will be organized virtually sometime next year towards the end of first quarter, it will not be a SC so the agenda will be different and it is open for suggestions.

CoEs welcomed the initiative which will be an opportunity to exchange ideas on a certain number of points such as partnerships, among others.

5. PRESENTATION OF TRAINING CATALOGUE FOR 2021

The training catalogue was displayed and as discussed before, it was agreed that each of the courses will be checked again in terms of the quality assurance process to make sure we have the feedback from our colleagues from different ITU Thematic Priorities. The provisional training catalogue is now adopted pending a final feedback from our colleagues from different ITU Thematic Priorities and there was no objection from any CoE. DBI will provide missing details.

6. CLOSURE OF MEETING

Ms. Susan Teltscher thanked everybody for their participation and also for staying longer and staying actively engaged until the very end. She ended her closing remarks by saying that there will be a next virtual meeting mid-year next year and an end of year meeting that can be done face to face hopefully.

Dr. Kaleem Usmani, Chair of the Steering Committee, thanked CoEs and ITU team for a productive and informative meeting and said that he believes that whatever was discussed will make 2021 training calendar a success. He ended his closing remarks by wishing everyone a happy holiday season, happy Christmas and best 2021.

ANNEX 1: LIST OF PARTICIPANTS

The Member States hosting CoEs:

- Ms. Patricia Kerrets-Kemei, Manager/Talent Management & Organization Development, Communications Authority of Kenya

GCBI Members for Africa Region

- Mohamadou A. SAIBOU, Founder & CEO - SMA CONSULTING GROUP
- Gladys Ogallo, Founder & CEO at Virtual Human Resources Services Ltd

Centres of Excellence:

- Dr. Kaleem Usmani, Mauritius, Chair of the Meeting

- Mr. Adamou Moussa Saley, DG ESMT, Senegal -
- Dr. André Onana, Senegal
- Dr. Adama Konate, DG ESATIC, Côte d'Ivoire
- Mr Rodolphe Kossonou, Côte d'Ivoire
- Mr. Jonathan P. Mwakijele, Kenya
- Ms. Anita Natwati, Kenya
- Mr. Yakubu Maitalata, Nigeria
- Mr. Ngozi Nwoche, Nigeria
- Ms Anne Chantal Mvogo, Cameroun
- Ms. Armelle MANKO, Cameroun

ITU Staff members:

- Andrew Rugege (Director of ITU Regional Office for Africa)
- Susan TELTSCHER (Head of Capacity and Digital Skills Development Division)
- Emmanuel NIYIKORA (Programme Officer, ITU Area Office Dakar, Africa Region)
- Elena STANKOVSKA-CASTILLA, (Capacity and Digital Skills Development Officer)
- Mike NXELE (Senior Capacity and Digital Skills Development Officer)
- Halima LETAMO (Training and Development Officer)
- Sylvie RAPOSO (Administrative Assistant)
- Marian Pletosu, Junior Digital Skills Officer
- Roger Schwertfeger, Intern in the Capacity and Digital Skills Development Division
- Ngome Eneme, Administrative Assistant
- Drini Rexha, Technical Assistant

Representatives of other Member states and agencies:

- Dilwani Abdoul Aziz, Regulatory Authority, Niger
- Achime Malick Ndiaye, DTIC, Senegal
- Lahatt SYLLA, Senegal
- Juliette Macauley, ARPT, Guinea
- Mathieu M. KOUROUMA, ARPT, Guinée
- Mamadou Lamarana BAH, ARPT, Guinée
- Soro Etienne, Côte d'Ivoire
- Victor Fernandes, INACOM/Angola

ANNEX 2: IMPLEMENTATION OF COE TRAINING ACTVITIES 2020

CoE	Courses planned	Delivery mode	Original dates	Final dates	Status	Number of participants registered	Number of participants certified
AFRALTI	Digital Broadcasting Content Regulation in a Converged Environment	online	3-14FEB	3-28AUG20	implemented	4	4
AFRALTI	Radio Frequency Spectrum Economy and Market Valuation Based on Digital Dividend (removed mid-June SC meeting)	Face-to-face	09-13MAR		cancelled	NA	NA
AFRALTI	Digital Broadcasting Masterclass	online	4-8MAY20	30NOV-24DEC20	cancelled	NA	NA
AFRALTI	Spectrum Management Masterclass (removed mid-June SC meeting)	online	06-17JUL20		cancelled	NA	NA
AFRALTI	Radio Frequency Spectrum Economy and Market Valuation	online	07-18SEP20	7SEP-2OCT20	implemented	2	
AFRALTI	Digital Broadcasting Regulation in a Converged Environment	online	02-13NOV20	2-27NOV20	cancelled	NA	NA
AFRALTI	Broadcast Spectrum Management	online		5-30OCT20	cancelled	NA	NA
AFRALTI	Digital Broadcasting Content Regulation in a Converged Environment (removed mid-June SC meeting)	online	05OCT20 -30OCT20		cancelled	NA	NA
AFRALTI	Radio Frequency Spectrum Economy and Market Valuation (2nd intake)	online	16NOV-11DEC20		ongoing	9	
DBI	ICT Applications, Products & Services using Microsoft Office	Face-to-face	22-26JUN20		cancelled	NA	NA
DBI	Social Media Management and Digital Marketing	Face-to-face	10-14AUG20		cancelled	NA	NA
DBI	Developing Web-based Applications	Face-to-face	21-25SEP20		cancelled	NA	NA
DBI	Information and Cybersecurity Principles and Practices	online	05-30OCT20		cancelled	NA	NA
DBI	Child Online Protection: Consumer Awareness on Cybercrimes	Face-to-face	20-21OCT20		cancelled	NA	NA
DBI	Digital Evidence and Cyber Forensics for Judicial Officers, Investigators, Legal Practitioners & Prosecutors	Face-to-face	02-06NOV20		cancelled	NA	NA
ESATIC	Management de la sécurité des systèmes d'information (norme ISO/IEC 27001: lead Implémenter	Face-to-face	24-28FEB20		implemented	14	14
ESATIC	Conception des réseaux d'accès optiques	online	23-24MAR20	16NOV-12DEC20	cancelled	NA	NA
ESATIC	Comprendre l'Internet des Objets (IoT)	online	20-24APR20	5-31OCT20	cancelled	NA	NA

ESATIC	Sécurité des applications d'internet et de mobile Banking	online	25-29MAY20	2-28NOV20	cancelled	NA	NA
ESATIC	Evolution vers la 5G: principes techniques et nouvelles opportunités économiques	online	22-26JUN20	28SEP-24OCT20	cancelled	NA	NA
ESATIC	Les systèmes embarqués pour l'IoT	online	20-24JUL20	23NOV-19DEC20	cancelled	NA	NA
ESATIC	Protection des données à caractère personnel	online	01-28SEP20	16-28 NOV20	implemented	4	
ESMT	Montage et configuration d'équipements TNT	Face-to-face	9-13MAR20		cancelled	NA	NA
ESMT	Télévision Numérique Terrestre (TNT) et Informatique de l'audiovisuel: production, transport et diffusion	online	13-17APR20	27JUL-29AUG20	implemented	21	19
ESMT	Management de projet: approches prédictives et agiles		20APR-22MAY20		cancelled	NA	NA
ESMT	Régulation des services financiers digitaux et des FinTechs		15-19JUN20	30NOV-26DEC20	implemented	5	
ESMT	Gestion avancée du spectre pour la 5G	Face-to-face	13-17JUL20		cancelled	NA	NA
ESMT	Applications et modèles économiques de la Blockchain	Face-to-face	26-30OCT20	28-31DEC20	upcoming		
ESMT	Nouveaux enjeux en gestion et contrôle du spectre	online	30NOV-18DEC20	30NOV-26DEC20	ongoing	14	
NCB	Cybersecurity Risk Management	online	30-31MAR20	28-30SEP20	implemented	162	16
NCB	Cybersecurity Policy and Strategy	online	Quarter 3 2020	25-27NOV20	implemented	346	
SUP'PTIC	Systèmes de paiement mobile - Transactions électroniques et monétique	Face-to-face	07-09APR20	18-20NOV20	cancelled	NA	NA
SUP'PTIC	Enjeux techniques et juridiques de la large bande fixe et mobile	online	22-25APR20	10NOV-10DEC20	ongoing	5	
SUP'PTIC	Qualité d'un système large bande sans fil	online	22-26JUN20	12-31AUG20	implemented	11	11
SUP'PTIC	Aspects techniques et juridiques de la création d'entreprises innovantes - Services innovants : Réglementation et Régulation à l'épreuve du numérique	online	08-11SEP20	December	cancelled	NA	NA
SUP'PTIC	Gouvernance et sécurité de l'Internet	Face-to-face	27-30OCT20	24-27NOV20	cancelled	NA	NA
SUP'PTIC	Stratégie numérique et transformation digitale	online	27-29MAY20	30OCT-30NOV20	implemented	11	
SUP'PTIC	Blockchain et applications	Face-to-face	21-24JUL20		cancelled	NA	NA

ANNEX 3: LIST OF COE TRAINING COURSES FOR 2021

CoE	Course Title	Duration	Dates	Venue	Mode of Training	Course Fee(USD)
AFRALTI	Economic and Market-Based Methods of Radio Frequency Spectrum Management	4 weeks	1-26Febr21	Online	Online	960
AFRALTI	Digital Broadcasting Content Regulation in a Converged IP Environment	4 weeks	1-26 Mar21	Online	Online	960
AFRALTI	Radio Frequency Spectrum Economy and Market Valuation	4 weeks	3-28May21	Online	Online	960
AFRALTI	Digital Broadcasting Masterclass	4 weeks	7June-2Jul21	Online	Online	960
AFRALTI	Economic and Market-Based Methods of Radio Frequency Spectrum Management	4 weeks	2-27Aug21	Online	Online	960
AFRALTI	Digital Broadcasting Regulation in a Converged IP Environment	4 weeks	6Sept-1Oct21	Online	Online	960
AFRALTI	Spectrum Management Masterclass	4 weeks	1-26Nov21	Online	Online	960
DBI	International Computer Driving License (ICDL) - workforce modules	5 days	26-30 Apr21	Nigeria	Blended	250
DBI	Social Media Management and Digital Marketing	5 days	21-25 Jun21	Nigeria	Face-to-face	250
DBI	Visual Communication and Infographics using Microsoft PowerPoint	5 days	9-13Aug21	Nigeria	Blended	250

DBI	Cyber Forensics and IT Risk Management	2 weeks	11-22Oct21	Online	Online	300
		5 days	25-29Oct21	Nigeria	Face-to-face	500
DBI	Emerging Cybercrime Trends: Cybercrime Investigations and Mobile Forensics for Security Intelligence, Investigators and Law Enforcement Officers	5 days	22-26Nov21	Nigeria	Face-to-face	300
SUP'PTIC	Gouvernance et sécurité de l'internet	1 month	19Jan-19Feb21	Online	Online	400
SUP'PTIC	Les Réseaux d'accès optiques FTTH	4 days	16-19Feb21	Cameroun	Face-to-face	300
SUP'PTIC	Transactions électroniques et la Monétique	4 days	23-26Feb21	Cameroun	Face-to-face	400
SUP'PTIC	Applications et modèles économiques de la BlockChain	1 month	30March-30 Apr21	Online	Online	300
SUP'PTIC	Transformation et régulation des services financiers :Fondamentaux des microfinances et des Fin Tech	1 month	28Jun-28Jul 21	Online	Online	400
SUP'PTIC	Services innovants : Réglementation et Régulation à l'épreuve du numérique	4 days	24-27Aug21	Cameroun	Face-to-face	400
SUP'PTIC	Qualité d'un système large bande sans fil	1 month	30Aug-30 Sept21	Online	Online	400

ESATIC	Gestion des risques liés à la sécurité de l'information	3 days	10-12 Mar21	Côte d'Ivoire	Face-to-face	560 USD
ESATIC	Conception des réseaux d'accès Optiques	5 days	22-26 Mar21	Côte d'Ivoire	Face-to-face	930 USD
ESATIC	Comprendre l'Internet des Objets (IoT): Principes, Normes, Ecosystème et opportunités économiques	5 days	19-23 April21	Côte d'Ivoire	Face-to-face	930 USD
ESATIC	Sécurité du cloud	5 days	03-07 May21	Côte d'Ivoire	Face-to-face	930 USD
ESATIC	Sécurité des applications des services bancaires	5 days	07-11 June21	Côte d'Ivoire	Face-to-face	930 USD
ESATIC	5G: Technologies et opportunités économiques	1 week	21-26 June21	Online	Online	280 USD
ESATIC	Les Systèmes embarqués pour IoT	5 days	19 -23 July21	Côte d'Ivoire	Face-to-face	930 USD
ESATIC	La Protection des données à caractère personnel	2 weeks	06-20 Sept21	Online	Online	280 USD
ESMT	Informatique de l'audiovisuel : Transport, virtualisation et stockage	4 weeks	08Mar-3Apr21	Senegal	Blended	850 USD
ESMT	Régulation des services financiers digitaux et des FinTechs	4 weeks	03-29May21	Online	Online	400 USD
ESMT	TNT : Les aspects techniques, planification et services	5 days	21-25June21	Guinée Conakry	Face-to-face	850 USD
ESMT	Gestion avancée du spectre pour la 5G	5 days	12-16July21	Senegal	Face-to-face	850 USD
ESMT	Management de projets digitaux : approches waterfall et agile (SCRUM)	5 weeks	05Jul-07Aug21	Online	Online	600 USD

ESMT	Montage et configuration d'équipements TNT	5 days	11-15Oct21	Senegal	Face-to-face	850 USD
ESMT	Applications et modèles économiques de la Blockchain	5 days	20-24Dec21	Senegal	Face-to-face	400 USD
NCB	Cyber Disaster Response: Development of Simulation Exercises	3 days	April 2021	Online	Online	Free of charge
NCB	An Introduction to Developing National Cyber Emergency Response Plans	3 days	August 2021	Online	Online	Free of charge
NCB	Building an effective cybersecurity team	3 days	November 2021	Online	Online	Free of charge