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Report by the Secretary-General

JIGSAW FEASIBILITY STUDY ON ESTABLISHING AN ITU TRAINING INSTITUTE

Summary

This document presents the final report of a feasibility study to establish a training institute in ITU. The ITU Council, at its session in June 2019, instructed the Director of BDT "to undertake an in-depth analysis and review of current training and capacity-building activities undertaken by the Group on Capacity Building Initiatives, the ITU Academy and centres of excellence, and report to Council-20 on the results of the study and on the possible creation of a capacity-building institute in ITU". The secretariat wishes to express its appreciation to the Kingdom of Saudi Arabia for their support to cover the costs of this study.

The report was prepared by an independent external consultancy, Jigsaw Consult.

Action required

The report is submitted to the Council for **consideration**.

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References

Council documents C19/98 and C19/115, C20/32

Introduction

The ITU Council, at its session in June 2019, instructed the Director of BDT "to undertake an in-depth analysis and review of current training and capacity-building activities undertaken by the Group on Capacity Building Initiatives, the ITU Academy and centres of excellence, and report to Council-20 on the results of the study and on the possible creation of a capacity-building institute in ITU".

Subsequently, ITU contracted an independent external consultancy, Jigsaw Consult, to undertake the study. The terms of reference included the following elements:

- Review of the global landscape of capacity-development programmes in the field of digital technologies.
- Stocktaking of existing capacity-development activities provided by ITU.
- Identifying existing gaps and areas of improvement.
- Assessing demand for a new training institute.
- Resource requirements and governance structure for the new training institute.
- Alternative options to improve ITU's work in capacity development.
- Recommendations on the way forward.

The work was carried out between July and December 2020 and the final report was delivered by Jigsaw Consult in March 2021. The full report is submitted to Council-21 for consideration (see the Annex to this document).

The report recommends the implementation of one of the following three options:

- Option 1: The establishment of a centralized Unit within the ITU secretariat for the delivery of capacity development and training as outlined in their report (paragraphs 173-193);
- Option 2: The creation of an ITU Training Institute building on the outline presented in their report (paragraphs 91-159); or
- Option 3: Continued incremental improvement in the quality of the ITU's provision of capacity development and training through implementation only of the short-term recommendations summarized in paragraph 6 in their report.

Annex: *1*

Feasibility study on establishing an ITU Training Institute: final report

Contract reference: CTR-S-BDT-2020-007

Date	09 March 2021
Version	Final
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Glossary

ACM	Association for Computing Machinery
AFRALTI	African Advanced Level Telecommunications Institute
AWC	Association for Women in Computing
BDT	Telecommunication Development Bureau of the ITU
BR	Radiocommunication Bureau of the ITU
BSNL	Bharat Sanchar Nigam Ltd
CCTP	Climate Change Training Programme
CD&T	Capacity Development and Training
CSD	Capacity and Skills Development Division (formerly HCB)
CIS	Commonwealth of Independent States
CoE	Centre of Excellence
CTO	Commonwealth Telecommunications Organisation
CTU	Caribbean Telecommunications Union
DTC	Digital Transformation Centre
eMCM	Online Master of Communication Management
FAO	Food and Agriculture Organisation
FCC	Federal Communications Commission, the United States of America
FIGI	Financial Instrument Global Identifier
GCBI	Group on capacity Building Initiative
GEM	Gender Equality and Mainstreaming
GS	General Secretariat
GSMA	Global System for Mobile Communications Association
HCB	Human capacity Building Division within BDT (CSD since 2019)
IADB	Inter-American Development Bank
ICANN	Internet Corporation for Assigned Names and Numbers
ICAO	International Civil Aviation Organisation
ICDL	International Computer Driving Licence

I-CODI	International Centre for Digital Innovation
ICTP	International Centre for Theoretical Physics
IEEE	Institution of Electrical and Electronics Engineers
IIDE	Indian Institute of Digital Education
ILO	International Labour Organisation
IoTTP	Internet of Things Training Programme
IsDB	Islamic Development Bank
ISO	International Organization for Standardization
ITAN	Information Technology Association of Nigeria
ITC	Internet Training Centres
ITCILO	International Training Centre of the ILO
JIU	Joint Inspection unit
L&D	Learning and development (usually applied to internal activities)
NOW4WRC19	Network of Women for WRC-19
PP	Plenipotentiary
QoSTP	Quality of Service Training Programme
RA	Radiocommunication Assemblies
RRS	Regional Radiocommunication Seminars
SME	Small- and Medium-sized Enterprises.
SMTP	Spectrum Management Training Programme
TRA	Telecommunications Regulatory Authority
TSB	Telecommunication Standardization Bureau of the ITU
UKTA	United Kingdom Telecommunications Academy
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNESCO	United Nations Educational Scientific and Cultural Organisation
UNICEF	United Nations Children's Fund
UNITAR	United Nations Institute for Training and Research
UN-SG	United Nations Secretary General
UNSSC	United Nations System Staff College
UNU	United Nations University
USTTI	United States Telecommunication Training Institute
WCIT	World Conference on International Communications
WHO	World Health Organisation
WIPO	World Intellectual Property Organisation
WRC	World Radiocommunication Conference
WRS	World Radiocommunication Seminars
WSIS	World Summit on the Information Society
WTDC	World Telecommunication Development Conference
WTSA	World Telecommunication Standardization Assembly

Executive summary

1. This report is in response to ITU Contract CTR-S-BDT-2020-007 to undertake a feasibility study on establishing an ITU Training Institute. The terms of reference (Annex 1) specify that the report should include: context and background, a review of existing capacity development within the ITU, the identification of gaps and areas of improvement, the demand and resource requirements for a new training institute, alternative options, and recommendations. It concentrates, though, primarily on the potential establishment of a Training Institute.

2. The report provides advice concerning the intended focus of ITU activities relating to capacity development and training. It recognises the important distinction between three types of capacity development, namely

- *Institutional* (the enabling environment of people and organisations that sets the overall framework for capacity development, including laws, rules, policies and power relations in a country);
- *Organisational* (the internal structures, policies and procedures that determine how effective organisations are); and
- *Individual* (the skills, experience and knowledge that enable an individual to contribute effectively).

This report recommends that the ITU's capacity development and training emphasis should mainly be on enabling governments effectively to deliver appropriate and equitably beneficial usage of digital technologies and telecommunications to all those living within their states, rather than on the ITU seeking directly to provide capacity development and training to individual citizens throughout the world.

3. The report recognises and applauds the recent improvements in delivery of capacity development and training activities provided by BDT, BR and TSB (paras 28-31). In particular, six main strengths of the ITU's provision are. noted (para 64):

- The ITU's image as a trusted provider of capacity development and training;
- Perception by users of the appropriate quality and relevance of its existing provision;
- The commitment and knowledge of ITU staff;
- The recent improvements to the ITU Academy portal;
- Respect for the ITU's certificates; and
- Staff recognition of the need for improvement in the management and delivery of capacity development and training.

4. Building on the above, the report identifies nine gaps and areas for improvement in the ITU's capacity development and training activities (paras 65-66):

- The need for a coherent overall strategy with respect to the purpose, design and delivery of capacity development and training;
- The need for an overall, systematic and coherent needs analysis of the capacity development and training required by the ITU's members;
- Strengthening of the mechanisms for quality assurance and control;
- The need for a reflective approach to the purpose of capacity development;
- The development of systematic and coherent reporting of capacity development and training activities within the ITU;
- Improving both the quality and relevance of the training provided;
- Ensuring that the ITU's financial reporting systems enable accurate breakdowns of the total costs involved in capacity development and training;
- Enhanced training of more ITU staff in the design, delivery and evaluation of capacity development and training; and
- Improvements in the accuracy of what the ITU says it does in its website and documentation and what it actually does.

5. The report emphases the global diversity and extent of capacity development and training activities in the fields of telecommunications and digital technologies or ICTs that are delivered by international organisations, companies and civil society (paras 68-78, 82), and especially the extent and modalities of delivery by other UN Agencies and entities (paras 79-81). In the light of these and taking into consideration the UN Secretary General's *Roadmap for Digital Cooperation* (June 2020), which recommends that the ITU and UNDP should lead on the creation of a new joint facility for digital "capacity-building", the report suggests that the ITU should focus its own capacity development and training activities especially on areas where it has niche expertise and a competitive advantage, whilst also building strategic collaboration with other organisations and agencies (especially UNDP) so as to reduce the duplication and overlap in delivery of such activities across the UN system and beyond.

6. In the light of the ITU's ongoing activities and the overview of other existing capacity development and training globally, the report offers the following short-term recommendations (paras 162-172). It is recommended that these are implemented regardless of the longer-term strategy to be adopted.

- Create and implement a clear overall strategy and approach to capacity development and training activities.
- Establish a budget line for all capacity development and training activities so that value for money can be assured.
- Craft and implement a simplified and clear framework for all of its capacity development and training.
- Commit to and implement more rigorous quality assurance processes.
- Ensure that relevant staff are appropriately trained to deliver high-quality capacity development and training.
- Develop a clear, integrated marketing strategy for all of these activities.
- Create a dynamic and effective alumni network.
- Continue to enhance the ITU's Academy platform.
- Streamline and enhance the quality of delivery of the Centres of Excellence.
- Craft carefully designed and planned partnerships.

7. With respect to a potential ITU Training Institute (paras 91-159), the report identifies the likely benefits, especially

- Greater clarity of purpose for ITU capacity development and training;
- More effective centralised co-ordination and delivery of such activities;
- Enhancing the quality and quantity of outputs and outcomes; and
- Crafting an integrated community of valuable and relevant expertise for ITU members.

and the challenges, especially

- The complexity of introducing new governance structures as a result of an Institute being part of the ITU, yet separate from it;
- The financial requirements with a likely minimum start-up endowment of at least USD 50 million required, alongside continued funding support;
- The rapid shift globally towards online training, especially following COVID-19;
- The strong global competition in digital technology and telecommunications capacity development and training;
- The management requirements of a physical presence;
- The varied appetite of members and other stakeholders towards the creation of an institute;
- Concerns within the UN over inconsistencies in the terminology relating to Institutes and Academies;
- The identification of a willing and generous host country; and
- The loss of an established ITU Academy brand identity.

8. The report also proposes a potential alternative model to the creation of a quasi-independent Institute, namely the formation of a centralised Unit within the ITU Secretariat that implements and supports delivery of all of its capacity development and training activities (paras 173-193) including *inter alia*:

- The provision of services to all relevant Bureaux and Departments within the ITU, working with them (in a variety of ways) to craft together the highest quality relevant learning resources and (where relevant) delivery of training;
- Its focus would be on delivering capacity development and training primarily to member state governments and regulators;
- Where appropriate and requested it would also provide such training to Sector Members and relevant other organisations;
- It would consist of a team of c. 15-18 people with expertise in all aspects of training relating to the ITU's mandate (from conceptualisation and design, to implementation and delivery);
- The Unit would also develop and maintain an alumni network to ensure appropriate measurement of learning outcomes, as well as providing a global peer network of trained individuals within organisations committed to using learning effectively for delivery of the ITU's mandate, who could also support and mentor each other.

Such a Unit could have distinct advantages over the creation of an Institute, especially in being lower cost, not requiring complex new governance structures, being more directly integrated within the existing ITU Secretariat infrastructures, and in building on the ITU Academy brand.

9. In the light of paras 7-8, the report recommends implementation of one of the following in addition to its short-term recommendations:

- Option 1: The establishment of a centralised Unit within the ITU Secretariat for the delivery of capacity development and training as outlined in this report (paras 173-193);
- Option 2: The creation of an ITU Training Institute building on the outline presented in this report (paras 91-159); or
- Option 3: Continued incremental improvement in the quality of the ITU's provision of capacity development and training through implementation only of the short-term recommendations summarised in para 6.

10. Jigsaw Consult expresses gratitude to everyone who engaged in this study, and especially those representatives of member states, participants in training activities, members of ITU staff and all of the other people who gave so generously of their time and expertise through participating in the interviews, discussion groups and surveys upon which the report has been based.

Section 1: Introduction

1.1 Purpose of the study

11. This report provides an analysis and review of current training and capacity development activities within the ITU and assesses the feasibility and needs for the establishment of a training institute. It is in response to ITU Contract CTR-S-BDT-2020-007 and addresses each of the key criteria listed within the terms of reference (Annexes 1 and 2).

1.2 Structure of the report

12. The report begins with an introduction (section 1), summary of the methodological approach (section 2), and review of the context and background for the study (section 3). It then focuses on the existing capacity development and training activities provided by ITU (section 4), an assessment of the quality of these activities (section 5), and the budgeting and resources allocated to capacity development and training (section 6). Following this, the report identifies current strengths, gaps and areas of improvement within the current delivery (section 7). The report then steps back to consider the wider context within which ITU capacity development and training operates (section 8). The bulk of the report then provides an assessment of the demand and resourcing required for a new Training Institute for the ITU (section 9). The report closes by providing a series of strategic recommendations, both short-term and longer-term (section 10) and a conclusion (section 11). Annexes provide further detail in support of the report's arguments.

Section 2: Methodology

13. Five main methods were used to generate the evidence upon which this report is based: analysis of ITU documentation and material; documentary analysis of other materials; interviews; discussion groups; and surveys.

- *Documents*. The foundation of the research was based on both publicly-facing ITU materials (including the ITU website and Academy portal), and internal documents and data that were made available. These underlie the foundation for the stockholding analysis and review of existing ITU provision.
- *Interviews*. 65 individuals (n=28 within the ITU and n=37 outside) based on recommendations from ITU staff and the need to gain further information (see Annex 9).[1] Care was taken in the interview design to ensure that the interviewees felt able to share their thoughts and feelings honestly, that they were analysed rigorously, and that the information was stored as securely as possible.
- *Discussion Groups*. Three groups were invited to participate in further one-hour discussions: senior regional staff within the ITU (n=7), those involved in delivering the BDT's thematic priorities (n=9), and the Centres of Excellence focal points (n=14).
- *Online surveys*. These were designed for four main groups of respondents: participants in capacity development and training activities delivered by all three sectors (ITU-D, IUT-R and ITU-T) in French and English (n= 369) ; the Centres of Excellence (n=14); Study Group Chairs and Vice-Chairs (n=40); and all member states in six languages (n=30). It was important that all of these were given an opportunity to respond to this review.

Section 3: Context and background

14. Three important contextual issues that were prominent during 2020 when the review was conducted are significant for interpreting the report's recommendations.

[1] All interviews were conducted by Zoom given the challenges caused by COVID-19.

3.1 Meanings of capacity development and training.

15. There is lack of clarity within the ITU and beyond as to exactly what capacity development and training are. Much of the UN system continues to use the term "Capacity Building",[2] but the ITU has recently changed its terminology to the. now more widely accepted term "Capacity Development". The term "Capacity building" is widely criticised because it is seen as implying that capacity is being built from the ground up. In contrast, the term "capacity development" is increasingly recommended, because it implies activities that are designed to develop existing capacities. Rather than assuming there is no capacity, it implies that there are indeed existing capacities, but they need to be developed in certain ways for particular purposes.[3]

16. It is also important to recognise that although the terms "capacity development" and "training" are often used interchangeably, they are fundamentally different. Training is about enabling people to gain specific skills for certain tasks, whereas capacity development is much broader and more complex as described above. More formally, "Capacity development encompasses a whole range of activities designed to empower individuals and institutions … Training is just one element of capacity development.".[4] The report follows this definition, and views training as an element of capacity development that includes many different forms and types of activity.

17. Three different types of capacity development are generally recognised and provide a framing for the recommendations of this report:[5]

- *Institutional* (the enabling environment of people and organisations that sets the overall framework for capacity development, including laws, rules, policies and power relations in a country);
- *Organisational* (the internal structures, policies and procedures that determine how effective organisations are); and
- *Individual* (the skills, experience and knowledge that enable an individual to contribute effectively).

3.2 The fluidity of change accelerated by COVID-19

18. The spread of SARS-CoV-2 and the resultant COVID-19 pandemic has influenced this review in three ways: heightened awareness of the role of digital technologies globally; increased use of online digital learning methods; and practical challenges in undertaking the research on which this report was based.

19. First, the speed with which companies and international organisations have turned to innovative ways of using digital technologies to support the delivery of health, education and commercial activities during COVID-19 has highlighted the ever-more dominant way that these technologies have permeated society. As well as the strong response by the ITU to the pandemic,[6] many other entities both within the UN and beyond have become more powerfully visible in terms of their digital responses on development challenges in 2020, especially in the field of capacity development and training.

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[2] See, for example, UN (2020) *Report of the Secretary-General: Roadmap for Digital Cooperation*, New York: United Nations. "Capacity-building" is mentioned 16 times, with pp.12-13 being specifically on Digital Capacity Building. See also European Parliament Think Tank (2017) Understanding capacity-building/ capacity development: A core concept of development policy, https://www.europarl.europa.eu/thinktank/en/document.html?reference=EPRS_BRI(2017)599411

[3] A succinct summary is available at OECD, Paris Declaration and Accra Agenda for Action, https://www.oecd.org/dac/effectiveness/parisdeclarationandaccraagendaforaction.htm.

[4] Kurbalija, J. (2012) What is the difference between training and capacity development?, *Diplo Blog*, https://www.diplomacy.edu/blog/what-difference-between-training-and-capacity-development.

[5] See Thomas, V. (2006) Linking individual, organizational, and institutional capacity building to results, *World Bank Capacity Development Briefs*, Number 19, https://openknowledge.worldbank.org/bitstream/handle/10986/9585/389150Capacity0D1Brief11901PUBLIC1.pdf?sequence=1&isAllowed=y; UNDP (2009) Capacity Development: a UNDP Primer, New York: UNDP,

[6] See, for example, https://www.itu.int/en/Pages/covid-19.aspx; although compare also the visual impression of this with UNESCO's https://en.unesco.org/covid19 and the UNDP's https://www.undp.org/content/undp/en/home/coronavirus.html COVID-19 responses. It is nevertheless interesting to note that none of the 20 reports on the UN SG's COVID-19 response page https://www.un.org/en/coronavirus/un-secretary-general (as of 21 September 2020) was specifically related to the role of digital technologies.

19. Second, the dramatically increased amount of video-conferencing and online learning during the pandemic means that much less capacity development is likely to be delivered face-to-face in the future, and this will require considerable retraining of those delivering and receiving it online, so that the benefits of the technology can best be realised, and the potential harms mitigated.

20. Third, COVID-19 has also had significant implications for how the research and information gathering required for crafting this report has been approached. The original intention to attend relevant ITU activities and events so as to meet face-to-face with key interlocutors had to be abandoned, and these activities were replaced by online interviews and discussions, reviews of online materials, and also the use of a greater number of online surveys than was originally intended.

3.3 The UN Secretary General's Roadmap for Digital Cooperation

21. The UN Secretary General's *Roadmap for Digital Cooperation* was published shortly before work on this report was started, but after the original terms of reference were finalised.[7] Given the Roadmap's recommendation that the ITU and UNDP should lead on the creation of a new joint facility for digital "capacity-building", the report addresses ways through which the ITU and UNDP might work together to achieve this. Three other features of the *Roadmap* are also salient: the need for more holistic and inclusive approaches to "capacity-building"; the desirability of a needs assessment to support "capacity-building" providers in targeting their services so that they meet stakeholder needs; and the UN Secretary General's commitment to "work with United Nations entities to launch a broad multi-stakeholder network to promote holistic, inclusive approaches to digital capacity-building for sustainable development".[8]

Section 4: Review of existing capacity development and training activities provided by ITU

4.1 The ITU's institutional framework for capacity development and training

22. Capacity development and training activities are seen by the ITU's members and staff as being a very important part of its activities, but the organisation does not at present have a clearly articulated and documented holistic framework or strategy for delivering them. There is also little evidence of a systematic approach that recognises the important differences and linkages between its *institutional*, *organisational* and *individual* dimensions.

23. Staff in each of the Bureaux highlighted four main challenges with the ITU's existing capacity development: each of the Bureaux has until recently acted largely independently with respect to its delivery; there is insufficient formal documentation and systematic reporting on both its quantity and quality; there is limited agreement on how it should best be delivered; and much of its development has been somewhat *ad hoc* in response to requests from members at its Conferences (Plenipotentiary, WTDC, WRC, WTSA) and the particular interests of its leadership.[9]

24. The ITU's Strategic Plan for the Union 2020-2023[10] briefly mentions "capacity building" and does indeed refer to the specific *institutional* capacity of the ITU's membership, but this is not one of the ITU's five strategic goals.

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[7] UN (2020) *Report of the Secretary-General: Roadmap for Digital Cooperation*, New York: United Nations.
[8] UN (2020) Report of the Secretary-General: Roadmap for Digital Cooperation, New York: United Nations, p.24.
[9] Although BDT's capacity building mandate (Objective 5) is specified as *'To build human and institutional capacity in order to improve skills in the development and use of telecommunication/ICT networks and applications, and to foster digital inclusion for people with special needs, such as persons with disabilities, through awareness raising, training activities, sharing information and know-how and the production and distribution of relevant publications.'* https://www.itu.int/en/ITU-D/Capacity-Building/Pages/MandateStrategy.aspx
[10] ITU, Resolution 71 (Rev. Dubai, 2018): *Strategic Plan for the Union 2020-2023*, https://www.itu.int/en/council/planning/Pages/default.aspx.

Moreover, this plan does not contain a detailed framework within which capacity development can be conceptualised or implemented.

4.2 A framework for understanding the ITU's capacity development and training activities

25. It was therefore necessary for the review team to develop a framework to summarise the wide range of activities undertaken under the broad theme of capacity development and training within the ITU (Annex 3). This revealed a dissonance between what was published about the ITU's activities, especially on its website, and what staff actually say that they do. At the start of the review many mentions of capacity building/development[11] on the ITU's website directed users to the ITU Academy platform, which describes itself as "the main online gateway to ITU's capacity development activities", and yet gives prominence primarily to the Centres of Excellence and online training courses. This downplays the considerable amount of capacity development and training delivered through workshops and seminars, much of which has traditionally been face-to-face.

26. The framework that emerged also highlights the important distinction between *formal* and *informal* capacity development and training.[12] Indeed, as this review progressed, it became increasingly clear that it was often the informal interactions rather than necessarily any formal training that were of most importance to government officials in effecting changes within their countries and institutions.

27. The GCBI and the newly-named Capacity and Skills Development Division of BDT (CSD) have recognised the challenge of terminology, and initiated an attempt in late 2019 and early 2020 to reach agreement on a standard set of ITU-wide definitions. This highlighted the difficulties in doing so, not least because it clearly revealed interesting differences between the beliefs, terminology and principles of those involved in its crafting and across the three Sectors.

4.3 The capacity development and training activities of the ITU

28. This section provides a broad overview of the main characteristics of the ITU's capacity development and training activities summarised schematically in Annex 3. It also highlights an important distinction between the capacity development and training actually *delivered by* ITU staff (mainly in workshops and seminars, but increasingly also online in courses) and the activities that are *facilitated by* the ITU (such as much of the material delivered through the Academy and DTCs).

Formal capacity development and training

29. The ITU delivers and facilitates both face-to-face capacity development and training provided across all Sectors in workshops and seminars, as well as online training provided on, or facilitated through, the ITU Academy. Two of the most externally visible[13] mechanisms through which the ITU's formal capacity development and training are delivered are the ITU Academy and the Centres of Excellence Programmes, and this overview therefore begins with them.

- The **ITU Academy platform**[14] has become the externally most visible "go-to" focus for the ITU's work in capacity development and training, and was significantly upgraded in 2019. It mainly focuses on the training courses and online learning (with certification) facilitated by the ITU, and therefore under-

[11] In much of its documented work and on the ITU website the term "capacity building" is still used much more frequently than "capacity development". The remainder of this report, however, uses the term "capacity development" throughout, unless quoting directly from a document that continues to use the term "capacity building".
[12] For examples of the importance of the informal, see Ubels, J., Acquaye-Baddoo, N-A. and Fowler, A. (eds) (2010) *Capacity Development in Practice*, London and Washington DC: Earthscan.
[13] Visible in the sense of how they are portrayed on the ITU's website and Academy portal, and thus evident to external view. It is much more difficult to find out details about face-to-face workshops and seminars through the ITU websites, although some are listed in the Calendar of Events https://www.itu.int/en/events/Pages/Calendar-Events.aspx.
[14] https://academy.itu.int

represents the many activities delivered in face-to-face workshops and seminars, especially those delivered by ITU staff. It was originally created as a brand in 2012,[15] to bring together the main elements of the ITU's work in this field, and it is one area of the ITU's capacity development and training activities for which there is a clear and documented strategy (published in 2015).[16] The Academy is considered positively by the 369 participants who responded to the survey, with >65% confirming partial or definite agreement with all but one of five assertions about its quality and functionality.[17] Nevertheless free text qualitative comments from 214 respondents during the review period also provided a wide range of suggestions for its further improvement, some of which have already been implemented as part of the ongoing development of the platform in 2020.[18] The ITU Academy has seen a significant increase in usage in 2020. The latest figures for 2020 (November) indicate that 89 courses had been completed through the Academy since the beginning of the year, with 36 pending delivery by the end of the year. Likewise, at the beginning of 2020, there were 10,000 registered users and this number had grown to 17,000 by November, with a stated aspiration that they may reach 20,000 by the end of the year.

- The ITU's **Centres of Excellence** (CoE) network features prominently as the only ITU capacity development and training activity included explicitly on the top-level menu of the Academy's portal. The CoE project (as it was initially called) was launched in 1997 and, in essence, through it the ITU facilitates access of members to courses that are provided by entities competitively selected as CoEs. In recent years CoEs have been chosen and reviewed on a four-year cycle, the last of which was completed in 2018.[19] The internal performance evaluation report of the 2015-18 cycle, provides a useful starting point for this summary.[20] This review did not, though, comment on the learning needs of people in each region, nor on the perceptions of participants about the quality of course delivery, although feedback from participants is available from the course feedback forms and from the annual summaries submitted by CoEs. In the present cycle, there are 28 CoEs in the six ITU regions.[21] From 2016 to 2019, the CoEs delivered 363 courses to 11,125 participants[22]. While the comments from CoE focal points reiterated contentment overall with the network, they raised many other issues and concerns, including a desire for closer collaboration with the ITU and its other members, concerns over the business model, and recognition that there is room for improvements in the quality assurance mechanisms. Several participants commented that a fundamental review of the CoE system is overdue. Interviews and comments relating to the CoEs vary strongly in their opinions. Those who were able to benefit from the CoE programme (some providers and the participants who were pleased to gain certificates as a result) were positive about it, whereas many others were less so.

30. This section now summarise each of the other main types of capacity development and training provided and facilitated by the ITU, recognising that although these are less visible in the ITU's documentation and website, workshops and seminars have traditionally played a very strong role within the overall ITU portfolio:

- **Workshops** are the primary mechanism through which face-to-face training is provided by the ITU, with around 600 having been held over the last five years (about two-thirds by BDT – see below under regional and thematic). BR and TSB convene workshops especially in conjunction with their Study Group meetings. BR convenes Regional Workshops, Inter-sectoral Workshops

[15] ITU (2013) Overview of ITU activities in human capacity building: presentation to 2nd meeting of GCBI, Missenden Abbey, https://academy.itu.int/sites/default/files/media/file/GCBI_meeting_presentation.pdf/ provides a useful historical overview of the evolution of much of the present ITU capacity development activity.
[16] ITU BDT (2015) Strategy for delivery of ITU Academy training programmes, Final version.
[17] The exception being French responses to the question about the use of the "My Invoices" process.
[18] During the review period, further ongoing developments to the Academy platform have been made which have improved its functionality and clarity, but the review team was unable to access a log of all of these changes. Many of the comments in this report are based on the status of the platform in July 2020 when its content and functionality were reviewed.
[19] ITU (2018) Operational Processes and Procedures for the ITU Centres of Excellence Network, Geneva: ITU.
[20] ITU (2019) *Centres of Excellence: Performance Evaluation Report 2015-2018*, Geneva: ITU. This was based in large part on a survey completed by the CoEs.
[21] List of CoEs by region, https://academy.itu.int/centres-excellence/coe-cycles/coe-cycle-2019-2022. This lists only 28 CoEs, although several ITU documents mention 29 CoEs in the present cycle.
[22] Document - CoE Course stats 2016-2019

and Inter-regional Workshops,[23] all of which play a very important role in developing the capacity of participants to be able to engage actively in the Sector's activities. TSB likewise convenes a range of workshops on issues within ITU-T's areas of focus that include a wealth of opportunities for members and others to gain a better understanding of these topics.[24]

- **Seminars and webinars**: Both seminars and workshops are well-established and important traditions within ITU, although different sectors retain varying definitions and practices. For BR, seminars are a crucial part of their capacity development and training, and need to be seen as being combined with their provision of workshops, as with the WRS.[25] Through the 2015-2019 cycle, BR provided over 100 partial fellowships for its RRS and over 60 full fellowships for WRS (one per administration for eligible countries). Both BR and TSB have delivered their seminars online as webinars in most of 2020 (see Annex 8).
- **Training courses**. Five modalities of training are provided, mainly by BDT: online through the Academy Platform, through CoEs, through academic partners, through partner institutions, and classroom, online and self-studies. TSB additionally delivers an online course for its members, *The Recommendation ITU-T A.1: Work Methods for ITU-T Study Groups* course. Previously it also delivered a Next Generation Networks (NGN) course through the Academy but for one year only.
- Hands-on, **practical training** is delivered as part of the diverse portfolio of each of the ITU's sectors, but is particularly prominent in BR and TSB's activities, where it is an integral part of their workshops (see section on workshops).[26]
- **Clinics**, although similar to workshops are treated separately by ITU-T. Typical of these is the FIGI (Financial Instrument Global Identifier) Security Clinic organised in Geneva with the World Bank Group and the Bank for International Settlements in December 2019.[27]
- **Regional training activities.** All three Bureaux undertake a range of face-to-face regional capacity development and training activities, with those convened by TSB and BR largely falling within the remit of their workshops and seminars summarised above. BDT, through the ITU's Regional Directors (and sub-regional leads) and its network of capacity development focal points aims to be responsive to specific requests for training from member states, as well as promoting the Sector's wider international capacity development and training activities.[28]
- **Thematic capacity development and training**. Regional and thematic capacity development and training are often combined within the BDT's portfolio. Currently, thematic leads are developing several courses, with advice and support from the CSD team on design and quality assurance, but drawing on external experts to develop some of the content. There is also recognition that the Results Based Management process initiated over the last year has begun to reap dividends through enhanced collaboration within the Sector. There is additional evidence of positive collaboration with other Sectors in developing new cross-cutting activities, as with TSB on Quality of Service. ITU-D has signed 118 projects overall since 1st January 2015,[29] of which 23 (19%) were under the "Capacity Building" theme (22) or mentioned capacity development in some

[23] See for example the Inter-regional Workshops for WRC-19, https://www.itu.int/en/ITU-R/conferences/wrc/2019/irwsp/Pages/default.aspx.

[24] Many workshops are delivered alongside or as part of ITU events (https://www.itu.int/en/events/Pages/Calendar-Events.aspx.). A review of activities in 2019 shows that, of all the events that took place, the majority were study groups, study group working parties or working parties, at 68% total. ITU-T ran the highest proportion of events, with 77% of the total. ITU-D ran 11% of events, ITU-R 9%, and ITU-SG 3%. Events took place in 71 different countries. Of all events, 43% were concluded, 41% were confirmed, 7% were cancelled, 5% were implemented, 2% planned, and 1% postponed. It is noteworthy, particularly in the light of events through 2020, that already in 2019 the most popular modality was online (37%), followed by face-to-face in Switzerland (26%), and China (5%).

[25] https://www.itu.int/en/ITU-R/seminars/Pages/default.aspx; see also RAG_20 and RAG_16 documents

[26] See for example https://studylib.net/doc/13357348/bridging-the-standardization-gap--bsg--programme-vijay-mahttps://studylib.net/doc/13357348/bridging-the-standardization-gap--bsg--programme-vijay-ma... dating from 2015.

[27] https://www.itu.int/en/ITU-T/Workshops-and-Seminars/201912/Pages/default.aspx.

[28] It should be recognised that the decision at Plenipot-18 for the BDT's regional offices subsequently to be representing the entire ITU is still working through, although increasing alignment of some offices before then has helped to facilitate matters.

[29] Excluding archived and "seeking funds" projects.

way (1). A further important thematic element of capacity development is provided by the General Secretariat in the specific activities provided to SMEs during the Telecom World event.[30]

- **The BDT's training programmes**[31] are a legacy of past WTDC decisions. In essence, these were intended to be high-level (Master's-equivalent) substantial programmes, designed with considerable input of ITU staff as well as external consultants, that could then be delivered in collaboration with reputable universities.[32] In practice, though, these programmes have not yet delivered fully on their expectations, despite considerable input from some ITU staff.[33] Four have been developed: Spectrum Management Training Programme (SMTP);[34] Quality of Service Training Programme (QoSTP)[35] with 13 modules, 6 obligatory and 7 elective; Internet of Things Training Programme (IoT TP), with 15 modules plus an overview module;[36] and Climate Change Training Programme (CCTP). The Academy portal still indicates that the ITU is seeking partners to deliver most of them and none of them are yet being run as full higher degree programmes, although various modules are indeed being delivered, and a few modules are also used by ITU Regional Offices in some of their training related events.
- **Distinct initiatives.** At the start of this review two distinct and separate initiatives formed part of the BDT's wider stated capacity development activities: the Internet Training Centres (ITCs) and the Digital Transformation Centres (DTCs).[37] The ITCs are no longer seen by the CSD as being part of the ITU's capacity development and training activities, but they remained featured on the ITU's website at the start of this review.[38] The DTCs are a much more recent initiative launched in partnership with Cisco at Telecom World in 2019.[39] A DTC is an "institution selected by ITU and Cisco that provides digital skills training to citizens"[40] and they are intended to develop digital skills at basic and intermediate levels for citizens through the creation of a network of centres.[41] Their stated focus is on "Those at the bottom of the social pyramid, who need basic digital skills", as well as the general public, start-ups and policymakers.[42] As yet, little evidence is available concerning the monitoring and evaluation mechanisms put in place for the initiative, or of how the development outcomes thereof will be measured. In addition to the DTCs, the development during 2020 of the I-CoDI initiative can also be included as a distinct programme that has some capacity development implications. I-CoDI was initiated in response to member states' desire to create a culture of innovation within the ITU.[43] At its heart is the ambition to provide specialist and

[30] ITU Telecom World 2019 SME Programme, https://www.ituaj.jp/wp-content/uploads/2019/03/WT19-Flyer-SMEs.pdf.
[31] Sometimes also referred to as holistic training programmes.
[32] Although "high-level" appears to have been somewhat flexibly defined, they were seen by many as being intended to be at a Master's level. Key reference documents here are HCBD BDT ITU (2015) Strategy for delivery of ITU Academy training programmes Final Version; and ITU (no date) Guidelines for the Quality Assurance Assessment of the ITU Academy Training Programmes.
[33] ITU HQ is currently working on converting overview modules of these programmes into online self-paced courses to be delivered through the ITU Academy.
[34] ITU Academy (2013) SMTP Spectrum Management Training Programme: an ITU Academy Initiative, https://drive.google.com/drive/folders/1mW8ST5QkNQSGKhy9smEBektAeIR0AMSg. In parenthesis, it can be noted that this choice of acronym (SMTP) seems strange for an organisation focussing on digital technologies, since it is more widely used to refer to the Simple Mail Transfer Protocol.
[35] ITU Academy BDT ITU (2014) Quality of Service Training Programme (QoSTP) Report, https://academy.itu.int/sites/default/files/media/file/QoS%20TP%20report.pdf.
[36] HCB ITU (no date) Report on the IOT Training Programme (IOT TP), https://academy.itu.int/sites/default/files/media/file/IoT%20TP%20Report.pdf. This programme is completed and ready for market.
[37] See also the recent ILO-ITU Digital Skills campaign which is profiles on the ITU Academy platform as one of the ITU's main capacity development and training activities https://academy.itu.int/main-activities/ilo-itu-digital-skills-campaign. Since this is more of a campaign than actually the provision of capacity development and training by the ITU it is not discussed further here.
[38] See https://www.itu.int/en/ITU-D/Capacity-Building/Pages/ITUInternetTrainingCentres(ITC).aspx. It is recommended that as far as possible the ITU removes such out-of-date information from its website.
[39] https://academy.itu.int/main-activities/digital-transformation-centres-initiative.
[40] ITU (2019) Digital Transformation Centres Initiative
[41] See newsletters available at https://academy.itu.int/main-activities/digital-transformation-centres-initiative/dtc-news.
[42] ITU (2019) Digital Transformation Centres Initiative.
[43] I-CoDI Design Phase, Kickoff Presentation, September 2020. See also ITU Webinars (2020) Slide Deck and Report on Web dialogue on the ITU International Center of Digital Innovation (I-CoDI), 29 June 2020.

tailored support to member states that wish to develop a culture of innovation, and is likely to include workshops and other related capacity development instruments for them.

- **Master's programmes**. The surveys and interviews indicated that there is some demand for the ITU to provide Master's level training. At present, the only full Master's programme offered under the ITU's auspices is the Master of Communication Management, designed ad taught by the United Kingdom Telecommunications Academy (UKTA) and accredited through the University of Rwanda.[44] This was originally developed in the mid-2000s, and has been delivered online through the ITU Academy since 2016. Historically there have been about 30 people on the programme at any one time, and in 2019 ten successful candidates graduated from eight countries.[45] AFRALTI offers the same eMCM, taught by UKTA and accredited by the University of Rwanda, but makes no mention of the ITU on its site with respect to this.[46]
- **Conferences and symposia.** BR and TSB especially emphasise the importance of conferences and symposia in their capacity development and training activities. Although a case can be made that conferences such as AI for Good should be treated as informal, rather than formal training, TSB argues strongly that the listed events are formal because an ITU Circular or other formal means of invitation are issued for these events, and they form part of a specific action under their Action Plan. Likewise, BR considers that its Symposia,[47] which are often held in conjunction with Study Group meetings, play a very important element in providing capacity development to members.
- **Formal mentoring** can be effective for individual capacity development, but also at a group level, and has risen in importance among certain teams within the ITU, especially in TSB and BR. TSB provides some mentoring within its Study Groups, and BR also provides mentoring for Conference Chairs and Vice-Chairs. Two other mentoring initiatives, though, are particularly noteworthy: the work done in BR in advance of WRC-19 to support women's participation through the creation of a Network of Women for WRC-19 (NOW4WRC19);[48] and the mentoring associated with the SME Programme at Telecom World.
- **Quizzes.** Much of the formal assessment in the CoE training courses is in the form of multiple choice quizzes. Some training courses, though, do make use of more complex types of assessment and assignments. Quizzes are also used elsewhere in formative assessment within the ITU, notably in the BSG Quiz.[49]

Informal capacity development and training

31. The ITU delivers many informal activities that also contribute to institutional and organisational capacity development beyond the formal activities noted above, and these also help build individual knowledge and understanding.[50] The main ways through which this happens are through:

[44] https://academy.itu.int/index.php/main-activities/curriculum-development/online-master-communication-management-emcm. Tuition fees are USD 4,20 with each part being charged separately; see below under resources for more detailed discussion on the financial model

[45] http://www.ukta.co.uk/graduation-at-the-university-of-rwanda/. As well as the MCM, it also offers a Master of Laws in Information and Communications Technology in collaboration with AFRALTI and the Open University of Tanzania (http://www.ukta.co.uk/accredited-training-qualifications/)

[46] https://www.afralti.org/emcm-july-2020-intake/

[47] Most recently, for example, see Satellite Communications Symposium 2019 – S.C. Bariloche, https://www.itu.int/en/ITU-R/space/workshops/2019-SatSymp/Pages/default.aspx, which provided an opportunity for participants "to present and discuss latest technologies in satellite communications and space missions, national space plans, regulatory and market aspects of space services".

[48] Network of Women for WRC-19, https://www.itu.int/en/ITU-R/study-groups/rsg4/rwp4a/NOW4WRC19/Pages/default.aspx.

[49] https://www.itu.int/en/ITU-T/gap/Pages/quiz.aspx. This is not actually considered by TSB to be a type of formal capacity development, but is included here because their website does indeed treat it as such.

[50] A regularly updated diary of events is published at https://www.itu.int/en/events/Pages/Calendar-Events.aspx.
For the importance of informal learning see: Manuti, A., Pastore, S., Scardigno, A.F., Giuancaspro, M.L., and Morciano, D. (2015) Formal and informal learning in the workplace: a research review, International Journal of Training and Development, https://doi.org/10.1111/ijtd.12044; Adamo, A. (2008) IDRC's strategic evaluation of capacity development: a cross-case study analysis, https://idl-bnc-idrc.dspacedirect.org/bitstream/handle/10625/47605/IDL-47605.pdf?sequence=1;

- **The ITU's publications**. The ITU's publications contribute significantly to the global body of knowledge relating to digital technologies and telecommunication. This integral and important part of the ITU's work can be developed further for capacity development activities, not least in helping members interpret, understand and use the regulations. Many other interesting and valuable publications are also made available by the ITU Bureaux in addition to the formal annual publications included under the above heading.[51] Two ITU journals have also been launched, the first (*ICT Discoveries*) in 2017 and the second (*Future and Evolving Technologies*) in 2020. All of these publications provide useful materials that could be developed and used in the formal capacity development and training activities provided by the ITU.
- **Participating in Study Group Meetings**. ITU Sectors have varying numbers of Study Groups, and their practices are managed in rather different ways. Participating in such meetings, though, provides much useful insight for participants, and an excellent opportunity to learn new things.[52]
- **Attending Conferences and meetings**. The ITU runs an extensive programme of international and regional conferences and meetings (such as the WSIS Annual Forum and Telecom World), most with little or no formal capacity development or training agenda. Nevertheless, these events are crucial not only in socialising and involving participants in the wider ITU "family", but also in providing them with valuable learning opportunities.

Section 5: Assessment of the quality of the ITU's capacity development and training activities

32. This section summarises six main approaches to addressing the quality of the ITU's capacity development and training: the levels for which it is intended; the quality of the providers; the quality of the materials; the quality of the assessments; the quality assurance mechanisms in place; and the quality of development outcomes. A striking observation that underlies much of this section is that the ITU generally appears to place more emphasis in its formal commentary and reporting on the *quantity* of capacity development that it delivers, rather than on showing or measuring its *quality* and development outcomes.

33. The ITU is nevertheless generally seen by users in a positive light in terms of the overall quality of its capacity development and training provision.[53] Just over 70% of participants, 41% of Study Group Chairs and Vice Chairs, and 58% of members responding to the survey thus definitely agreed that the ITU provides high quality capacity development and training. However, disaggregating these data and examining specific aspects of quality in more detail below suggests that there remains room for improvement.

5.1 The levels at which ITU capacity development and training is focused

34. Broadly speaking, most of the training offered across all ITU Sectors is foundational or intermediate, with some being advanced. The majority of BR and TSB's capacity development is focused on enabling professionals to have a foundation in how to use the resources developed by these Sectors to engage with their work requirements. BDT, in contrast, offers a wider range of levels of course. Some are quite basic, providing a general introduction to a topic, although the majority of courses offered by the CoEs for example are mid-level professional (or academic-related) courses, designed to provide participants with grounded knowledge in a relevant area. The surveys indicate a broad level of satisfaction overall with the quality of training provided at these levels. Nevertheless,

[51] This distinction can, for example, be noted by whether a publication is listed underneath the ITU publications main page https://www.itu.int/en/publications/ITU-D/... or within the BDT section of the ITU's site at https://www.itu.int/en/ITU-D/...
[52] It is obvious, but nevertheless important, to note that shifting completely to online meetings means that such informal networking and learning is much more difficult to convene.
[53] It should be emphasised that these surveys were distributed by the three Bureaux on the review team's behalf to those who had completed any of their capacity development and training activities (including online and face-to-face). With reference to the English language responses on the latest course undertaken online (facilitator led) accounted for 60.8%, face-to-face (facilitator led) accounted for 11.5%, and online (self-learning) for 18.2%; 59.7% were undertaken in 2020.

satisfaction with courses does not mean that they are necessarily of high quality for the levels at which they are taught (see further below under quality of providers and materials).

5.2 The quality of the external providers

35. Much of the capacity development and training facilitated by BDT is designed and delivered by external "experts" and consultants, training companies, or universities. The process for selecting them is therefore of critical importance in assessing their quality, and the ITU has in place quite rigorous processes for the selection of such providers.[54] The CoEs are likewise selected through a comprehensive application process, that involves careful review by ITU staff both regionally and from headquarters. However, the structure through which CoEs are selected, with a maximum of six per region, means that there can be considerable variations in quality between regions. Likewise, the review process can only review the quality of applications that are actually received. There can certainly be excellent Departments, and outstanding individual academics within low-ranking universities, and there are rational grounds for sharing the distribution of CoEs globally.[55] Nevertheless, it is striking that few of the academic CoEs are located in university institutions that are highly ranked or are globally prestigious.

5.3 The quality of the ITU's capacity development and training materials

36. The ITU produces a very wide range of varied capacity development and training materials under its umbrella brand in tune with the many different types of training summarised above. These are generally seen to be of good quality, although it is not surprising that there is some variability. The levels of positive comment about the latest capacity development activities in which participants participated emphasises that the materials satisfy their needs across all three Sectors.

37. The content of the four ITU programmes (SMTP, QoSTP, IoTTP, CCTP) was developed by people the ITU considers to be experts, and is all subject to peer review both by ITU staff and external reviewers. These programmes were developed within a clear framework that included good attention to detail with guidance on the development of module content,[56] peer review,[57] content approval,[58] piloting and delivery.[59] Care has gone into producing these programmes to include the quality and level of materials expected by experienced ITU staff and members.[60]

5.4 Quality of assessment

38. In recent years the CSD (and its predecessor HCBD) within the BDT has rightly been concerned about the relationship between certification and assessment. The ITU has often in the past given certificates of attendance for those who attend its workshops and events. There is a view, though, that certificates should only be given to those who have participated in training courses for which they have gained a certain level of expertise proven through some form of assessment. Those taking courses delivered within the Academy framework, especially those delivered by CoEs, must therefore now all pass a test, which must then be approved by the course leaders, before they are issued with a certificate. While this approach is to be welcomed, it must also be noted that assessments can be set at many different levels, and many training providers have a vested interest in ensuring a high pass rate of candidates.[61] The types of online assessment (tests and quizzes) used are also often quite basic

[54] ITU (2019) Service Order No.19/12 Procurement Manual.
[55] These grounds include that of equity between regions, the desire to help develop capacity actually within these institutions through their participation in the wider CoE network and other ITU activities, and the proximity and thus ease of travel to them for face-to-face training. The last of these, though, diminishes as increasing amounts of training is being delivered online, not least as a result of COVID-19.
[56] ITU, Guidelines for development of module content for ITU Academy Training programmes.
[57] ITU, Peer review guidelines.
[58] ITU, Process for approval of content.
[59] ITU Academy, Guidelines for the delivery of ITU Training programmes.
[60] Although note that the CCTP was under review itself during the Review period.
[61] A high pass rate is very important in attracting large numbers of students and thus revenue in the future.

multiple-choice questions although some courses do include alternative assessment modalities. Participants in general considered that courses delivered online through the Academy platform used quizzes and tests effectively.

5.5 Quality assurance mechanisms

39. One of this review's major findings is that there are insufficiently rigorous and systematic quality assurance mechanisms in place to enable Directors to be certain of the quality of the capacity development and training activities provided in their Sectors, both those delivered by the ITU's staff and those that the ITU facilitates. Regular reports, not least to WTDC, RA and WTSA, provide information on the quantity of certain aspects of the Bureaux's capacity development and training activities, but there is very little reporting on quality. The delivery of hundreds of courses does not necessarily mean that large numbers of people have learnt anything of value, or that this has delivered any appropriate development outcomes. Some good quality assurance principles are applied, but there are too few staff to implement them sufficiently effectively, they are insufficiently rigorous and detailed, and they are not always applied by those delivering the training.

The selection of experts and suppliers for workshops and courses

40. Much of the ITU's quality control is based on the original selection of those chosen to design and develop their workshops, courses and programmes. There is a strong belief within the ITU that the selection of "experts" guarantees quality, and once there is an expert in place the resultant product will therefore be of high quality. Basic quality control mechanisms are in place for the selection of experts, but more could be done to attract specialists of the highest quality for such work (see also para 54).

Course design

41. Internal ITU guidance is available on good course design, both for the CoE network and also for the four BDT Training Programmes.[62] The CoEs have formal operational procedures that cover most aspects of their work. Nevertheless, the CoE courses often rely heavily on the internal quality assurance mechanisms of their parent organisations. Other providers of capacity development and training within the ITU also seek guidance and advice on course design from staff in CSD. However, the ITU does not yet have in place all the rigorous quality control mechanisms that other well established UN agencies with a long tradition of capacity development and training, not least UNITAR,[63] have, or the well-honed practices of other excellent providers of such activities, such as Diplo.

Delivery of capacity development and training activities

42. Little evidence was found on the processes in place for quality assurance of actual course delivery, other than the use of feedback forms completed by participants. Many courses and activities are implemented by teams of people, but there was no evidence found of established good practices such as team review meetings, or mechanisms through which team members could provide regular feedback on each other's course delivery. Some of the strongest positive agreement in the participants' surveys were nevertheless related to the quality of the learning facilitators or tutors.

Feedback forms

43. All participants in Academy courses for which certificates are awarded must submit official feedback forms about their experiences of their courses, and the course leaders then have to submit an official end of year report on all of their activities. These feedback forms, though, focus mainly on the quantities of things rather than the quality or usefulness of learning experience for delivering effective development outcomes. Feedback forms are

[62] Note, in particular, ITU, Peer review guidelines, and ITU, Guidelines for the Quality Assurance Assessment of the ITU Academy Training Programmes.
[63] See for example the rigorous, yet simple and clear, guidance available in UNITAR's (2018) Quality Assurance Framework, Geneva: UNITAR.

also used in face-to-face workshops and seminars, although the results from these are not included in regular comprehensive reports.

Reporting mechanisms

44. The main official reporting mechanisms of the work of all of the Bureaux is to the WTDC, RA and WTSA conferences. These reports vary in style and include evidence about the number of capacity development and training events held in different categories, but there is little actually on the quality of such activities or on their development outcomes. Within BDT, the annual meetings of the GCBI also provide an element of quality assurance, although the committee is also charged with reviewing many other aspects of capacity development within BDT, and the March 2019 report only made one direct mention of quality. There are also regular cycles of review of key elements of provision, notably the CoEs, with the performance evaluation report of the 2015-2018 cycle[64] providing valuable evidence for this report.

5.6 The quality of learning outcomes and development impact

45. The ultimate purpose of the ITU's capacity development and training activities should ideally be measured in terms of the quality of development and implementation of learning outcomes that they achieve. However, the ITU's emphasis on quantity of delivery has tended to obscure considerations of quality.

Needs analysis

46. It is difficult to identify any formal systematic approach to the capacity development and training needs of the ITU's stakeholders, other than through decisions made at its Conferences and specific requests made to its regional offices and staff in its headquarters. Comments from individual ITU staff, as well as the documentation related to some such activities do indeed reflect awareness of the critical importance of such needs analysis, but this is not placed at the centre of an overarching ITU, or indeed Sector-level, strategy. All capacity development and training should begin with a comprehensive analysis of the needs of those for whom it is intended.

Clear learning objectives

47. There is awareness within the CSD team that the definition of clear learning objectives is central to the provision of effective capacity development and training, and that these should be related to the needs of participants. However, although many course materials do briefly state their learning objectives, and these are indeed reviewed by staff in CSD, there is little wider attention paid to this issue in the documentation reviewed.[65]

Measuring development outcomes

48. A third broad area of commentary concerns the ways through which the development outcomes of capacity development and training are measured. In short, the review found little evidence of this being done at all. Where the quality of capacity development and training activities offered under the ITU umbrella is indeed evaluated, it is almost always done through the use of feedback reports immediately on completion of a learning experience. It therefore happens before participants have had opportunity to put their learning into practice, and cannot measure the actual development outcomes, even if these had been identified among the learning objectives in the first place.

Absence of alumni networks

49. Effective training providers are increasingly building alumni networks, not least to be able to report back to their funders on the long-term impact of their activities. Some providers have this embedded within their organisational culture, so that they are continually learning more about the best ways through which they can

[64] ITU (2019) Centres of Excellence: Performance Evaluation Report 2015-2018, Geneva: ITU.
[65] It can also be noted that the "Guidelines for development of module content for ITU Academy Training programmes" likewise make no mention of the need for these to have learning objectives.

deliver appropriate and beneficial capacity development and training for their clients. The ITU does not maintain a systematic database of all those who have done their capacity development and training across all sectors.

Section 6: Budgeting and the resources currently allocated to capacity development and training in the ITU

50. The diversity and complexity of delivery modalities and the budgeting structures within the ITU make it very difficult to gauge expenditure and income from the ITU's capacity development and training activities, both within the organisation as a whole as well as within each of its sectors. The ITU's draft budget for 2020-21, for example, only mentions "capacity building" three times and training 11 times, and contains no figures on either income or expenditure that can be disaggregated for the purposes of this review.[66] The invisibility of capacity development and training in the ITU's formal budgeting processes is surprising, considering the very considerable amount of work and effort that goes into these activities.[67] The recent review of the ITU's regional presence thus notes that regional staff estimate that in 2019 they spent more time (14% on average) on the work of the "capacity building and human skills" cluster (now theme) than they did on any other of the then clusters.[68] Moreover, that report goes on to note that events, workshops and training take up about 52% of regional expenditure, covering a wide range of thematic areas, although it should be noted that not all of this can be attributed directly to capacity development and training.

6.1 Expenditure

51. The ITU does not have a tracking system for capacity development and training expenses, but has nevertheless been able to provide the following figures for such expenditure for the last five years for this review (Table 1; all but staff training costs are best estimates, and noted with a '*').[69] These suggest that capacity development and training expenditure has represented approximately 2-3% of the ITU's total expenses during this period.[70]

Table 1: Total capacity development and training expenditure (in k CHF)

ITU Sector	2016	2017	2018	2019	2020
TSB*	455	460	525	585	90
BR*	265	127	117	152	101
BDT regular budget*	841	906	970	1,179	727
BDT extrabudgetary*	1,794	2,192	1,753	1,628	597
ITU staff training	469	427	478	482	422
TOTAL	**3,824**	**4,112**	**3,843**	**4,026**	**1,937**

[66] Report by the Secretary-General. Draft Budget for 2020-2021, https://www.itu.int/dms_pub/itu-s/md/19/cl/c/S19-CL-C-0015!!PDF-E.pdf. Interestingly, two of these are mentioned under Objective R.3, relating to BR's increased knowledge outcome the entire R.3 objective uses 27.51% of ITU-R objective planned resources, and 10.19% of ITU planned resources); the other is under Objective D.2 relating to BDT's strengthening of member states (the entire D.2 objective uses 19.53% of ITU-D objective planned resources, and 7.03% of ITU planned resources). Training is mentioned under D.2, D.3, D.4, and in-service training.
[67] Some figures are available for the costs of running Study Groups, Workshops and Seminars, but these include much else besides just capacity development and training. For the 2020-21 budget, ITU-R thus plans to spend CHF 1.46 million on Study Groups, and CHF 780,000 on Seminars and Workshops; ITU-T plans to spend CHF 2.39 million on Study Groups, and CHF 600,000 on Seminars and Workshops; and ITU-D 796,000 on Study Group Meetings (Seminars and Workshops and included under Activities and Programmes).
[68] pwc (2020) *Review of ITU's regional presence*, p.165, referring to time spent on clusters in 2019 by all staff in ROs and AOs.
[69] As authors of this report, we are especially grateful for the considerable effort taken by the ITU's finance department in generating these figures for use here.
[70] Based on total ITU expenditure (in k CHF) in 2016 of 149,879, 2017 of 195,615, 2018 of 184,365 and 2019 of 244, 640 (from ITU official documents *Document C20/42-E* and *Document C17/9-E.*

Staffing

52. The largest item of expenditure on capacity development and training for most organisations is usually staffing. The ITU has very few dedicated capacity development and training staff, although many staff across the organisation are in practice delivering aspects of it. Thus only 5 staff in BDT and 1 in BR are specifically dedicated to capacity development and training, out of 150 total staff in BDT, 166 in BR, and 64 in TSB. Moreover, very few of the other staff in the organisation delivering workshops or courses have specific advanced training and qualifications in delivering effective high quality capacity development and training. Furthermore, as noted above, staff in regional offices report that they spend approximately 14% of their time in capacity development and training activities.[71] Extrapolation of these figures would suggest that around 15% (+/- 7.5%) of staffing costs across the organisation might actually be being spent on capacity development and training. This would equate to the total cost having risen from around CHF 22.3 million in 2017,[72] to CHF 30.6 million at the end of 2019.[73]

Consultancy and experts

53. Much of the development of course materials and wider contributions to the capacity development activities of the ITU is undertaken by the voluntary contributions made by individuals and institutions, not least through Study Group activities. The actual costs incurred by CoEs and other partner organisations in delivering their contributions are unknown, but the CoE financial model would not seem to be fully viable for many of the CoEs if measured purely in financial terms, especially for those CoEs that attract few students.[74]

54. The ITU also hires external consultants to design and deliver capacity development and training activities at an average cost over the last five years of 757 k CHF (Table 2).[75] Several of those interviewed for this report noted a tension between the ITU's claims that its staff are world-leading experts in their fields, and yet there is still a need for the ITU to employ considerable levels of external expertise to design and deliver its capacity development and training activities.

Table 2: Costs of hiring external consultants to design and deliver capacity development and training for the ITU (k CHF)

ITU Sector	2016	2017	2018	2019	2020
TSB*	25	25	40	50	25
BR*	12	7	7	14	4
BDT regular	444	363	394	530	463
BDT	271	365	248	264	234
TOTAL	**752**	**760**	**689**	**858**	**726**

55. A further interesting aspect of the employment of consultants and experts is the regions from which they are drawn. For example, the regional backgrounds of the experts who contributed to the development of the BDT's Training Programmes (Annex 5) was markedly skewed with 56% being drawn from Europe and 30% from the Americas[76]. None were from the Arab region, only one from the CIS, and three from Africa. This highlights the significant power relationships present in the implementation of at least some of the ITU's capacity development

[71] pwc (2020) *Review of ITU's regional presence*, p.165, referring to time spent on clusters in 2019 by all staff in ROs and AOs.
[72] Based on a total employee cost for the year ending 31 December 2017 of CHF 148,748,000 as reported in ITU (2017) Financial Operating Report for the Financial Year 2017 (unaudited), Council 2018, Document C18/42-E.
[73] Based on a total employee cost for the year ending 31 December 2019 of CHF 203,942,000 as reported in ITU (2020) Financial Operating Report for the Financial Year 2019, Council 2020, Document C20/42-E.
[74] Although, as noted above, many intangible reputational benefits must also be taken into consideration in terms of the reasons why CoEs might want to participate in the network. The full cost of these has not been identified, but should be readily available internally within the ITU
[75] These figures are included within those provided in Table 1.
[76] America here does not refer only to the USA, but indicates experts drawn from Canada and Latin America as well.

and training, which is designed and delivered by those from the richer and more powerful countries, and thereby might replicate existing global digital power structures.

Capacity development and training projects and programmes

56. BDT has been involved in 18 projects specifically related to capacity development since January 2015, summary financial details of which are in CHF (rounded) figures: ITU contribution (A) 234,521, Partner contribution (B) 2,396,914, ITU collection on partner contribution (C) 56,527, and total project cost (A+B-C) 2,574,909. This shows how working together with partners (mainly the governments of member states) the ITU has been able to spend less than CHF 250,000 to help deliver more than CHF 2,500,000 value of capacity development activities over almost six years, whilst also gaining a return of around CHF 56,500 (AOS, usually 7%[77]) to help defray its internal costs. In addition, it can be noted that the ITU has provided approximately 5,000 fellowships since January 2015, mostly to do some kind of training.[78]

57. Between USD 5,000 and USD 10,000 was made available for the development of each module of the BDT's Training Programmes. With 15 modules in each programme, this would mean that cost of development of each programme was a minimum of c. USD 75,000 (based on the lower figure of USD 5,000), making all four programmes have cost a total of c. USD 300,000.

Digital services

58. Between January 2016 and November 2020 the ITU has paid CHF 77,012.5 for hosting, support and maintenance services relating to the Academy, with the current monthly amount being CHF 2,195 a month. This figure seems to represent good value for such services. However, the shift to delivering capacity development and training online globally, in part as a result of the COVID-19 pandemic, has meant that the structure of financing such activities has changed, especially for those who now have to fund their own participation. In practice, there will have been savings in travel and maintenance costs for people previously attending face-to-face training, but costs of connectivity and access to online training will have increased. This is an especial challenge for those in many of the economically poorest countries that have high connectivity charges for services that are unreliable and thus limit the ability of participants to benefit fully from such training, especially when they are having to connect from their homes.

6.2 Income

59. Much of the ITU's directly delivered formal capacity development and training (as through attendance in Study Group Meetings, workshops and seminars) is provided as a service to members and therefore does not provide an income for the ITU. Likewise resources and training materials published by the ITU but made freely available online do not generate revenue for the ITU. Furthermore, most informal capacity development and training (as through participating in the ITU's events such as the WSIS Annual Forums and Telecom World) is freely available to participants. There is, though, some income for the ITU from the CoEs.

The Centres of Excellence model

60. Currently the prices charged by Centres of Excellence for participation in their courses are agreed annually in the regional Steering Committee meetings. The intention is to keep these as low as possible, but also to ensure that they meet the costs of delivering the courses. The total fees paid from CoEs to BDT fluctuate considerably on an annual basis, with figures for 2016-2019 varying from CHF 44,358 in 2019 to 78,737 in 2018. These more than cover the costs of digital services for the Academy platform, and usually in addition make a small contribution to staffing costs.

[77] The share taken by ITU on the partner's contribution to finance its internal functioning.
[78] The full cost of these has not been identified, but should be readily available internally within the ITU.

CoE financial records

61. Financial records are available for 24 of the CoEs. Of the 13 CoEs that provided complete records for 2015-2018, the average financial resource allocated is USD 53,978 over four years. This ranges from USD 8,000 to USD 160,000. For the period 2015-2018 there are 5 CoEs that have not provided any information on tuition fees collected. In future it would be advisable for the ITU to oblige CoEs with clear financial reporting requirements, with consistent parameters to allow for comparability over time and between CoEs.

6.3 Conclusions

62. The internal organisational structures within the ITU, especially those relating to finance, are insufficiently transparent in its publicly facing documentation.[79] This may well represent a structural issue whereby although it writes and talks about capacity development (usually as "building"), it remains not particularly clear about what it actually does in this area, how it is financed and how it is assessed. If, for example, there was a clear line in each Sector's accounts and budget mentioning capacity development and training (for both expenditure and income), then this would help provide greater clarity.

Section 7: Existing strengths, gaps and areas of improvement in the ITU

63. This section summarises the main strengths and areas of concern within the ITU's current provision of capacity development and training, drawing not only on the review of its internal processes, but also in comparisons with other agencies, and the opinions of those who responded to the surveys, interviews and discussions.

7.1 Strengths

64. This review has highlighted six main strengths of the existing provision of capacity development and training within the ITU and these are outlined below.[80]

1. **A trusted provider.** The ITU is widely seen by those who work closely with it as being a trusted provider of capacity development and training. This trust is based on perceptions that it is neutral, well-informed, reliable and knowledgeable, with the interests of its members at its heart.
2. **Appropriate and relevant quality.** The quality of its existing capacity development provision is generally perceived by participants to be appropriate and relevant to their needs.
3. **Committed and professional staff**. ITU staff involved in the delivery of all forms of capacity development and training, across all Sectors and in regional offices as well as headquarters in Geneva, are generally seen as being very committed to their work, knowledgeable and supportive.
4. **Recent and ongoing improvements in the Academy portal**. The recent improvements in the ITU Academy platform's functionality have been welcomed.
5. **Appreciated certificates.** ITU certificates are widely appreciated and respected, especially when they are combined with the logos of a prestigious academic or other international organisation.
6. **Recognising the need for change**. Staff within all of the bureaux of the ITU recognise the need for improvements in the management and delivery of capacity development and training, and have welcomed this review.

7.2 Issues of concern

[79] It may be that this information is indeed available to the leadership team within each Sector, but we have not been made aware of this. Much of the approximation has been based on figures for BDT.
[80] Citations below are all from the participants' surveys

65. There is positive support for many of the activities currently undertaken by the ITU , but the issues below nevertheless require serious attention.

1. **Lack of a clear, holistic and coherent strategy**. The ITU does not have a coherent overall strategy with respect to the purpose, design and delivery of capacity development and training. Likewise, there are no clear and coherent strategies towards capacity development and training within its sectors, or between sectors.
2. **Lack of sufficient and appropriate needs analysis**. There is little evidence of any overall, systematic and coherent analysis of the capacity development and training needs of the ITU's members.
3. **Weak methods of quality assurance.** Mechanisms for quality assurance and control of capacity development and training are relatively weakly developed, and cannot always guarantee the actual quality of the capacity development and training delivered. Furthermore, most reporting on capacity development focuses on quantity (such as numbers of workshops, courses and training sessions), rather than on the quality of such provision.
4. **Limited theoretical or practical institutional understanding of capacity development**. There appeared to be limited awareness of the different meanings and overall purpose of capacity development within the ITU, and especially of the important distinctions between institutional, organisational and individual capacity development.
5. **Insufficiently comprehensive systemic and coherent reporting**. There is little overall systematic and coherent reporting of capacity development and training activities within the ITU. The ITU delivers a very wide range of capacity development and training activities, but there is nowhere that this information is systematically reported in aggregate, and can therefore be evaluated in its totality.
6. **Concerns over quality and relevance**. Despite the overall general perception of quality as being high, the interviews conducted for this review indicated considerable concern about both the quality and relevance of much of the training provided. While some of the training and courses provided are undoubtedly of high quality this is by no means always the case.
7. **Insufficient explicit financial reporting on capacity development and training**. The ITU's financial systems do not permit accurate and detailed reporting of the actual costs of capacity development and training that it currently provides.
8. **Need for greater provision of internal training on delivery of capacity development and training**. Few staff within the ITU have been specifically trained formally in the design, delivery and evaluation of high quality capacity development and training. While many staff do have some practical experience in such delivery, and others have taught themselves through online courses to improve their skills, there is not a widespread culture of learning about the delivery of capacity development and training.
9. **Discrepancy between rhetoric and reality**. There was a wide discrepancy when this review began between what staff reported was actually done in terms of capacity development and training, and what was said on the ITU's website (including the Academy portal) and in its documentation. This has clear implications for the ways in which potential external users (and others) perceive the ITU's work in the field, and therefore represents a reputational risk.

66. As well as these structural issues, it should also be noted that there are too few experienced and well qualified staff employed by the ITU to enable it to deliver appropriately on the extensive needs and expectations of its members for capacity development and training of the highest quality.

Section 8: The wider context within which ITU capacity development and training operates

67. Very many organisations across the world provide high quality capacity development and training in the field of information and communication technologies, and are in effect direct competitors with much of what the ITU,

especially in BDT, seeks to do.[81] It is therefore essential for the ITU to identify and build on its own core strengths and competitive advantages, as well as learn from good practices elsewhere in the UN system, if it is to deliver the highest quality of service to its members. The ITU already supports its members in providing access to some of this existing wider global provision, and it is important to distinguish clearly between what the ITU actually produces and delivers itself, and what it makes available under its brand from others. Annex 6 provides an overview of the financial models used by different types of organisation in delivering such activities.

8.1 Capacity development and training in digital technologies and telecommunications

A crowded market-place

68. There are hundreds, if not thousands, of providers across the world that offer very high quality training and capacity development in specific aspects of ICTs, digital technologies and telecommunications, at a wide range of levels, and in multiple languages. Indeed, the ITU hires or partners with a selection of these in delivering its overall brand of capacity development and training. The last year has witnessed a dramatic transformation of the sector, with some well-known brands substantially increasing the numbers of people participating in their capacity development and training activities about digital technologies and regulatory issues.

69. It is therefore important for the ITU clearly to identify and robustly maintain its main competitive advantages. The most important of these perceived advantages are (see also para 64):

- Its neutrality, both politically and in terms of balance between government and the private sector;
- Its trustworthiness, linked to its neutrality but also related to the honesty and probity of its staff;[82]
- The high quality of its services in general, and its capacity development in particular; and
- Its strong brand identity.

70. Not all of these are in practice as robust as they might appear, and any failure to live up to them represents a risk factor for the organisation. On neutrality there is concern that the ITU may be aligned too closely with the interests of the private sector, and especially some large corporations; [83] in terms of quality of delivery, that what is provided by other organisations is often higher;[84] and in terms of brand identity, that many of those outside its networks are unaware that it exists. Moreover, since much of its training is actually delivered by other organisations or partners, these can gain more status and visibility from the training provided than does the ITU itself, even though the training is facilitated as part of the ITU brand.

The private sector

71. Many **technology companies** have long provided training, often for free, and often generic, although having an emphasis on their own products. Among the best known of these are those by Cisco,[85] Huawei,[86] Ericsson,[87] Microsoft,[88] Intel,[89] Samsung,[90] and ZTE,[91] but the list is very long (see also BSNL in India[92]). The best such courses

[81] This phrasing is used here because the first sentence of the "About…" page on the ITU's website says that "The International Telecommunication Union (ITU) is the United Nations specialized agency for information and communication technologies – ICTs" (https://www.itu.int/en/about/Pages). It is used to encompass all aspects of the ITU's work.
[82] Although the previous comment on financial trustworthiness from a member state should also be noted.
[83] See for example the role of Cisco within the new DTC initiative.
[84] See, for example, the work of Diplo, and some of the other organisations noted in this section.
[85] https://www.netacad.com/.
[86] https://e.huawei.com/uk/publications/global/ict_insights/201907041409/talent-ecosystem/huawei-ict-academy
[87] https://www.ericsson.com/en/portfolio/training-offerings
[88] https://docs.microsoft.com/en-us/learn/
[89] https://software.intel.com/content/www/us/en/develop/topics/ai/training.html
[90] https://www.khws.co.uk/work/samsung-academy/
[91] http://univ.zte.com.cn/eLearningweb/en/ZTE_Certification/ZTECC/
[92] http://rgmttc.bsnl.co.in/. See also Talwar, E. and Sharma, N. (2014) A study of training and development practices adopted by BSNL, IJSR, 3(9), 229-232, https://www.worldwidejournals.com/international-journal-of-scientific-research-(IJSR)/recent_issues_pdf/2014/September/September_2014_1493015030__68.pdf.

are of very high quality and provide a wealth of capacity development and training across the digital technology sector. Their ultimate intent, though, is primarily to develop and support the markets for their own products. Most of these companies also provide certification for their courses, which varies considerably in reputation, with certificates from Cisco and Huawei being of the highest repute in, for example, networking. The choice of companies with which the ITU partners does, though, also have geopolitical implications that have the potential to harm the ITU's perceived competitive advantage of neutrality, especially at a time of heightened political and economic tensions between China and the USA.[93]

72.There are also many **training companies** that provide digital capacity development and training of very varied quality. Most are unregulated and uncertified. The global educational technology market for example has been estimated (in 2020) to reach USD 404 billion by 2025,[94] and the digital transformation market as a whole is estimated as being worth USD 3,294 billion by the same date.[95] Training companies and entities that are better known and feature prominently in online searches include, for example: ICDL,[96] the UK's City and Guilds,[97] the Digital Skills Foundation,[98] Digital Skills Global,[99] and IIDE in India.[100] Many countries also have entities that provide directories of national digital skills training, as with Malaysia's Digital Economy Corporation.[101] As a UN agency that seeks to provide capacity development and training at little or no cost to its members, the ITU has a challenge in positioning itself in this market.

Professional bodies, foundations and standards organisations

73. Many professional bodies, foundations and organisations representing different technology sectors, not only deliver training but also provide varying structures for standards and certification.

74. Hundreds of **professional bodies** seek to provide digital technology capacity development and training to their members. These range from well-known bodies based in the USA such as the Association for Computing Machinery (ACM),[102] the Association for Women in Computing (AWC),[103] and the Institution of Electrical and Electronics Engineers (IEEE),[104] to much lesser known but in their own contexts much more important entities such as the Computer Society of Sri Lanka,[105] the Information Technology Association of Nigeria (ITAN),[106] or the British Computer Society.[107] If the ITU wishes to engage in such activities within countries it would be wise to do so by engaging collaboratively with the best possible local entities so that the collaboration can actually help increase the capacity of these more local organisations.

75. Global, regional and national **standards organisations** also provide frameworks within which digital technology and communication training are provided. The International Organization for Standardization (ISO) is probably best known, and does much work with professional organisations, as with the creation of ISO/IEC 20006 on the "Information technology for learning, education and training — Information model for competency" with

[93] See, for example, Cordell, K. (2020) The International Telecommunications Union: the most important UN Agency you have never heard of, CSIS, https://www.csis.org/analysis/international-telecommunications-union-most-important-un-agency-you-have-never-heard.
[94] https://www.holoniq.com/notes/global-education-technology-market-to-reach-404b-by-2025/.
[95] https://www.globenewswire.com/news-release/2020/06/10/2046146/0/en/Digital-Transformation-Market-Worth-3-294-Billion-by-2025-Growing-at-a-CAGR-of-22-7-from-2019-Global-Market-Opportunity-Analysis-and-Industry-Forecasts-by-Meticulous-Research.html.
[96] https://icdleurope.org/about-us/.
[97] https://www.cityandguilds.com/qualifications-and-apprenticeships/it/it-professional/4520-ict-professional-competence#.
[98] https://www.digitalskillsfoundation.org/.
[99] https://digitalskillsglobal.com.
[100] https://iide.co/about-us/.
[101] https://mdec.my/digitalskillstrainingdirectory/page/15/.
[102] https://www.acm.org/
[103] http://www.awc-hq.org/home.html
[104] https://www.ieee.org/
[105] https://www.cssl.lk/
[106] http://itan.org.ng/
[107] https://www.bcs.org/

the International Electrotechnical Commission.[108] Regionally, there are bodies such as the European Committee for Standardization, which for example has created an "e-Competence Framework: a European Standard for the Digital Economy".[109] Many countries also have their own training standards bodies, often connected with their educational examination boards. The earliest of these was the UK's British Standards unit created in 1901, which now also provides training as well as standards across a wide range of ICTs and Telecommunications.[110]

76. The expansion of the digital technology sector has generated a swarm of global and national **foundations** concerned with digital capacity development. These not only include foundations established by those who have made their wealth from their direct involvement in digital technologies, such as the Bill and Melinda Gates Foundation[111] or the Hewlett Foundation,[112] but also much smaller foundations, each trying to deliver their own contribution to capacity development and training in the context of digital technologies and telecommunications.[113]

77. Many bodies that **represent particular interest groups**, but are not themselves professional associations, also deliver capacity development and training activities, both for their own members and also on behalf of them with an interest in ensuring that their views help shape the policies of governments, international organisations and civil society entities. The ITU is already partnering with one of the most successful of these, the GSMA (Global System for Mobile Communications Association),[114] but despite the high quality of its activities, this training is often seen as being biased toward the interests of mobile operators. The USTTI (United States Telecommunication Training Institute)[115] is likewise seen as providing very high quality training, but is seen by some as largely representing the interests of US corporations.

Universities, higher education providers and national institutes

78. It is difficult to estimate the total number of Master's degrees available across the world in digital technologies, ICTs and telecommunications, but these already run into several hundreds. The FindAMasters platform listing 23,749 Master's degrees worldwide for example lists 318 referring to ICTs, 29 mentioning telecom, and 3,342 under digital.[116] Given these already exist, and that many are delivered by prestigious universities, it does not seem wise for the ITU to expend its valuable and limited resources by trying to develop its own Master's course, especially since it is not itself considered to be an academic institution. The possibility of working collaboratively with a small number of the highest-quality university institutions in helping to enhance these universities' existing Master's programmes might, though, be an option to consider if demand from members is sufficiently strong.

UN agencies and international organisations

79. The powerful conflicting factors that shape the ebb and flow between cooperation and competition among and between UN agencies have rarely been more apparent than they are in the context of digital technologies. In large part this is because these technologies have now become such a central dimension in the lives of people and organisations across the world, but it also reflects challenges over the level of resourcing of UN agencies, and the priorities of their senior leadership teams.[117] Most UN agencies are to some extent engaged in delivering capacity

[108] https://www.iso.org/obp/ui/#iso:std:iso-iec:20006:-2:ed-1:v1:en.
[109] https://www.cen.eu/news/brief-news/pages/news-2019-032.aspx.
[110] https://www.bsigroup.com/en-GB/industries-and-sectors/ICT-and-telecoms/.
[111] https://www.gatesfoundation.org/.
[112] https://hewlett.org/about-us/.
[113] See for example https://www.varkeyfoundation.org/, and https://digitalskillsglobal.com.
[114] https://www.gsma.com/training/
[115] https://ustti.org/
[116] https://www.findamasters.com.
[117] This, in part, lay behind the creation by the UN SG of the Roadmap for Digital Cooperation https://www.un.org/en/content/digital-cooperation-roadmap/. All of the eight key areas in the proposed roadmap are already being done to a greater or lesser extent by a wide range of stakeholders, notably by the ITU. This report focuses especially on the future role of the ITU in this space, recognising that the "Roadmap" exists, and that the ITU needs to play a leadership role with the UNDP in creating a new framework for international capacity development in digital capacity development within its context.

development and training in the use of ICTs in the context of how these technologies can be used to serve their remits. In particular, all of the agencies involved in the WSIS Action Lines have more than a passing interest in digital technologies, and they are therefore likely to have greater focus on the use of these technologies as part of their capacity development and training than are some of the other UN entities (Annex 4 thus provides an overview of areas of overlap between the BDT's thematic priorities, and the capacity development and training delivered by other UN agencies).

80. The ITU has indeed sought to collaborate in the past with several UN agencies, notably with UNDP in the implementation of in-country digital capacity development and training, with UNESCO in areas such as AI, with UN Women over the use of digital technologies by women, and with the ILO on the digital skills campaign. These "partnerships" have delivered varying success. However, the long-standing relationship with UNDP, through which the ITU has provided technical expertise and the UNDP delivered in-country knowledge and support, does provide a sound basis from which to build further, more substantial joint capacity development work in the future, as recommended in the *Roadmap for Digital Cooperation*.[118]

Other international agencies

81. Other international and regional agencies also provide capacity development and training in the use of digital technologies and telecommunications, both in supporting governments (institutional and organisational capacity development) and also in providing training for individuals at all levels. The ITU already works with some of these (such as ICANN and ISOC) in delivering shared capacity development activities, or in enabling interested people to access training provided by these international organisations[119] Regional organisations such as the CTU, the CTO, the IADB, or the IsDB, are also often preferred by those more regionally seeking capacity development and training.

Civil society capacity development and training

82. There are tens of thousands of "development-focused" civil society organisations of varying scale across the world, many of which provide capacity development and training in and through the use of digital technologies, often funded by multilateral and bilateral donors. This is particularly true in the spheres of health and education,[120] and overlaps especially with the ongoing work of the BDT's thematic areas on innovation, inclusion, services, and the environment. Much of this civil society activity is primarily directed at enabling *individuals* to access and use these technologies; much less is intended directly to provide *institutional* or *organisational* capacity development. This reinforces the tension noted previously about the balance that ITU members wish it to strike between the delivery of high quality capacity development to individuals or to government administrations, and suggests that the ITU might consider developing closer relationships with civil society organisations if a decision is taken to prioritise individual level capacity development and training.[121]

8.2 UN Agencies' modalities of delivering capacity development and training

83. It is important that the ITU learns from the experiences of other UN agencies in delivering capacity development and training, so that it can achieve the highest quality of practice, especially in light of the structural changes required in response to the COVID-19 pandemic and its longer-term implications. Increasingly agencies

[118] UN Secretary General (2020) Roadmap for Digital Cooperation, New York: United Nations.
[119] In the field of Internet governance, for example, it provided specific links through the ITU Academy to the following international organisations: Diplo, ICANN, the Internet Society (ISOC), WIPO and the CTO More widely, the ITU Academy lists 21 organisations of many different types as its partners (https://academy.itu.int/main-activities/partnerships), although in practice it delivers collaborative training, or acts as a broker, with and for many other entities.
[120] See for example information contained within Unwin, T., Weber, M., Brugha, M. and Hollow, D. (2017) The future of learning and technology in deprived contexts, London: Save the Children, updated in 2018 in work for UNICEF and made available at https://unwin.wordpress.com/2018/06/29/interesting-practices-in-the-use-of-icts-for-education/. See also the work of the EdTech Hub, https://edtechhub.org/, and all of the work done by UNESCO around Mobile Learning Week, https://en.unesco.org/mlw/2019.
[121] Although civil society organisations do participate in some of its activities, the ITU remains primarily a public-private UN agency whose members are governments and private sector entities (with some academic institutions).

are moving online, and the focus of this section is therefore mainly, but not exclusively, on online activities. Three important generalisations provide relevant context:

- There is great diversity in the modes of delivery between different UN agencies, and considerable cost-savings and synergies could be made by agencies working more closely together through a shared UN platform or platforms.
- COVID-19 will have lasting effects in shifting much capacity development and training in UN agencies that was previously undertaken face-to-face to online methods.
- Many UN agencies use Moodle[122] as their basic learning management system, primarily because of its "openness" and low cost, but they have all adopted different approaches to its use, and have created very different services and "feels" within their platforms.

Integrating capacity development and training platforms within the UN system

84. UN agencies generally treat their external capacity development (or more usually still "Capacity Building") and training activities completely separately from their internal staff development (frequently known as learning and development, or L&D), and frequently use different digital platforms for each. Such agencies could therefore make cost-savings by combining their internal- and external-facing platforms (see example of UNICEF). Even greater savings could be made by UN agencies if they clustered together to share a small number of over-arching learning platforms, rather than each seeking to provide their own. Significantly, the Joint Inspection unit report in 2020 on the policies and platforms used in support of learning across UN agencies was highly critical of existing practices, emphasising that such learning has to be more programmatic, that there is no systematic inter-agency co-operation, that the use of new technologies is random and inconsistent, and that staff themselves need to be more engaged.[123] In this context, several of those consulted for this report emphasised that the ITU, as the UN specialist agency for ICTs and telecommunications, with private sector members that are leading specialists in the field, should be able to have the very best digital learning platform of any UN agency, and that it might be feasible to create a new learning platform that other UN agencies with less expertise could also participate in.

Prominent other UN agency platforms

85. This section briefly summarises the capacity development activities of the FAO, ITCILO, UNICF, UNITAR and UNSSC, focusing particularly on their digital platforms. Further collaboration between the ITU and these organisations would be valuable, not least in helping to develop shared understanding between those involved in delivering such activities.[124]

86. **FAO elearning Academy**[125] The FAO has recently revitalised its e-learning platform, which is now both visually much more appealing, and also easy to navigate and use. It currently offers over 350 multilingual self-paced e-learning courses that are made freely available in various formats including MOOCs, technical webinars, online tutored courses, mobile learning, face-to-face training workshops, as well as University Master's Degree programmes and postgraduate degrees. These are explicitly designed to be aligned with the SDGs, and as a

[122] Moodle is a Free and Open-Source Learning/Content Management System (LMS/CMS) written in PHP and built by the Moodle Project coordinated by Moodle HQ and financially supported by more than 80 Moodle Partner service companies across the world. There are, though, very large numbers of LMSs across the educational and corporate sector that could be used. G2, for example, has recently reviewed some 371 corporate LMSs https://www.g2.com/categories/corporate-learning-management-systems; in the education sector, there are also numerous platforms, with eLearning Industry's 2020 report highlighting 19 top cloud-based LMSs, headed by Docebo, Adobe Captivate Prime, TalentLMS, SAP Litmos LMS, and LearnUpon LMS https://elearningindustry.com/the-best-learning-management-systems-top-list.

[123] https://www.itu.int/en/general-secretariat/Pages/hrmd.aspx; see organogram https://www.itu.int/en/council/ties/Documents/charts/20_HRM.pdf.

[124] UNESCO is not included in this analysis because although much of its work is seen as being about capacity development, it does not have its own learning portal. Instead, one of its Institutes, the International Institute for Education Planning (IIEP) has its own LearningPortal (https://learningportal.iiep.unesco.org/en) that to some extent serves this function, although it is designed very much for the needs of education planners and policy makers. UNESCO's Institute model is examined in further detail in the next main section.

[125] https://elearning.fao.org/.

global public good contribute directly to SDG4, "ensuring inclusive and equitable quality education and promote lifelong learning opportunities for all".[126] Its target audience is policy makers, government officials and technical staff, policy formulators, programme and project designers, and in particular individuals working to support and implement the SDGs Agenda 2030. An important feature of the FAO's design approach is that it is explicitly learner-centred, and It is particularly impressive that the FAO works with 123 partners from across the world, most of whom are prestigious organisations, in designing and delivering its materials. It also has a good mobile-learning solution.

87. **ITCILO**[127] The International Training Centre of the ILO, based in Turin (Italy) has a long and varied history since the 1960s, and is one of the few UN agencies to have its own specific training centre (see para 108). In recent years it has also sought to be at the cutting edge of digital online training provision and quality assurance. To this end, in 2019 it initiated a process to benchmark its activities against the ISO International Standard 29993 for learning services outside formal education. In 2019, it had a total of just under 140 staff, spread across 11 units, and its revenue was EUR 42.46 million, with an expenditure of EUR 41.252 million, and assets of EUR 16.323 million.[128] Traditionally, most of its training was face-to-face, but the percentage of distance-based and online participants has grown rapidly in recent years, and COVID-19 has led to a dramatic increase in the trend towards online distance-learning which culminated in a major update to its learning platform (historically based around Moodle) in 2020 to create a new eCampus experience for users.

88. **UNICEF.**[129] UNICEF's Totara-based[130] Agora platform, which was launched in 2015, is widely seen as one of the most successful in the UN's portfolio of learning management platforms. It provides courses both for UNICEF staff and for others. In 2019 it had 60,066 active users (of which 42,951 were non-UNICEF) and 123,281 course completions (including 69,180 by UNICEF staff and consultants), with its most popular courses being its mandatory self-paced courses. During the COVID-19 pandemic, it has adjusted swiftly and the team behind the platform is developing more than 150 new learning activities, whist also managing around 500,000 connections every month during the summer of 2020.

89. **UNITAR**.[131] The UN Institute for Training and Research exists was created because of a commitment to help decolonising countries engage with the international system, and as a result it remains an important democratising force in human capacity development. It does this through a very wide range of courses, from basic training up to Diplomas and Master's degrees, and including more unusual activities such as a young leaders summer training programme. Until recently, most UNITAR training was face-to-face but it has adjusted rapidly to the evolving demand for online learning. UNITAR also provides the Secretariat for the UN CC:e-Learn initiative, which is of particular interest since it brings together more than 30 multilateral entities to provide a systemic and co-ordinated approach to a rich diversity of training relating to climate change. Its learning environment has had some 348,176 users and has issued 106,465 certificates.[132] Both the UNITAR and CC:e-Learn platform are Moodle-based, although their look and feel is rather different.

90. **UNSSC**.[133] A final example of relevance to this review is the work of the UN System Staff College (UNSSC), which provides learning opportunities, training and knowledge sharing to help the UN become more effective, results-oriented and agile. It is headquartered in Turin (Italy) with a second campus in Bonn (Germany), and provides four main types of learning opportunities: residential courses, distance learning, strategic exchanges, and

[126] https://elearning.fao.org/mod/page/view.php?id=4534.
[127] https://www.itcilo.org/. For a recent review of part of its work see Krueck, O.J. (2020) Evaluation of training and learning activities: thematic area "skills development", ECCOS, https://www.itcilo.org/sites/default/files/inline-files/Evaluation%20Report_ITCILO_SkillsDev_by%20ECCOS.pdf.
[128] ITCILO (2020) Financial statements and external auditor's report for the year ended 31 December 2019, https://www.itcilo.org/sites/default/files/inline-files/CC%2083_5_1%20EN%20final.pdf.
[129] https://agora.unicef.org/.
[130] https://www.totaralearning.com/. Totara Learn is a powerful, flexible and open platform built on top of the Moodle platform and provides a learning management system, performance management and employee engagement functions.
[131] https://unitar.org.
[132] https://unccelearn.org/, date 3 November 2020.
[133] https://unssc.org/

seminars. Its virtual campus (UNKAmpus) is accessible to its alumni and participants who have registered for its activities, and claims to be "at the forefront of UN system efforts to provide comprehensive, accessible and effective learning opportunities for staff".[134] The UNSSC uses Claned[135] as a social learning platform for both online and face-to-face courses. It is also the only UN organisation that is at present legally allowed to implement Moodle Workplace outside the Moodle Partners model as a result of an agreement with the Moodle Foundation.[136] The recent JIU report notes that the UNSSC has strong potential to provide centralised learning services to the UN system, but almost half of all UN agencies do not use it, in part because of its high costs when compared with their own limited resources or similar offers from other providers.[137]

Section 9: Demand and resourcing for a new Training Institute for the ITU

91. This review focuses especially on the demand for and resourcing of a potential ITU capacity development and training Institute, and this section presents details of the arguments for and against such an Institute. On balance the review concludes that the challenges associated with such Institutes are likely to outweigh the potential benefits, but if these challenges can be overcome then it would be a viable proposition for the ITU. Section 10 that follows presents an alternative recommendation for consideration, which provides for a specialist unit within the existing ITU Headquarters that could provide many of the benefits of an Institute with fewer of their downsides.

92. This section first addresses the overall demand for an Institute, based both on the views of stakeholders, and also the material relating to existing global provision outlined in Section 8 above. It then examines the experiences of a sample of UN agencies that have indeed developed their own Institutes. In the light of these, Section 9.3 summarises the strengths and opportunities that an ITU Capacity Development and Training Institute would create, and Section 9.4 provides an overview of the challenges associated with delivering such an Institute. Section 9.5 then gives details of how an ITU Institute could function, and Section 9.6 suggests how these activities could be integrated within the ITU's wider portfolio of activities. Finally, Section 9.6 gives details of the financial implications of an Institute, including cost-recovery mechanisms and potential business models.

9.1 Demand for a capacity development and training Institute

93. The demand for a new ITU capacity development and training Institute can be assessed in two main ways: through the attitudes and opinions of the ITU's members and other stakeholders, and in the light of existing global provision. The evidence suggests that there are very mixed views as to the rationale and viability of the ITU creating such an Institute.

Stakeholder attitudes towards a capacity development and training Institute for the ITU

94. The ITU stakeholders consulted for this review had a very wide range of opinions about whether or not it would be beneficial to create a capacity development and training Institute. Interestingly, none of the 369 people who had previously participated in the ITU's capacity development and training activities who responded to the open question about how such provision could be improved volunteered the suggestion that creating an Institute would achieve this. However, In general terms, when asked specifically about the idea of an Institute, there was indeed support among members and Study Group Chairs and Vice-Chairs, with little differentiation of opinion as to whether this should be virtual or physical; members were slightly more positive about creating an Institute than were Study Group Chairs and Vice-Chairs (see Table 3). Amongst members, 41.6% definitely agreed with the idea of a virtual Institute, whereas 48% definitely agreed with the idea of a physical Institute. Importantly, though, there

[134] https://newunkampus.unssc.org/.
[135] https://claned.com/.
[136] Dumitriu, P. (2020) *Policies and platforms in support of learning: towards more coherence, coordination and convergence. Report of the Joint Inspection Unit*, JIU/REP/2020/2, Geneva: UN, p.48.
[137] Dumitriu, P. (2020) *Policies and platforms in support of learning: towards more coherence, coordination and convergence. Report of the Joint Inspection Unit*, JIU/REP/2020/2, Geneva: UN, p.63.

was more support among Members and Study Group Chairs and Vice-Chairs for alternative options for the future (not shown in Table 3), such as increased partnerships and even strengthening the current CoE system, than there was for creating an Institute. This suggests above all that that while there is indeed support for change in how the ITU delivers its capacity development and training, an Institute is not necessarily the preferred option. Nevertheless, only 17% of member states of the ITU responded to the survey designed for them, and it is therefore important that all members now have a wider opportunity to review the evidence presented below.

Table 3: Summary of opinions from survey respondents about the ITU creating a physical or virtual capacity development and training Institute

	Definitely agree	Partially agree	Neutral	Partially disagree	Definitely disagree
Virtual Institute - Members responses	41.6%	37.5%	12.5%	4.2%	4.2%
Virtual Institute - Study Group Chairs and Vice Chairs responses	36.8%	31.6%	21.1%	10.5%	
Physical Institute – Members responses	48%	32%	20%		
Physical Institute - Study Group Chairs and Vice Chairs responses	34.2%	21.1%	18.4%	15.8%	10.5%

95. The 65 interviews conducted for this review clearly indicated that stakeholders had very differing opinions about whether an Institute should be created, and if so what it should be like. There were almost as many opinions about the viability of an Institute as there were interviewees, but overall there was clear awareness that there are both strengths and weaknesses in the case for an Institute. In particular, interviewees highlighted:

- The need for substantial and sustained funding that an Institute would require;
- Concerns over whether the ITU has the capacity, particularly relating to staffing and expertise, to develop an effective Institute;
- The importance for the ITU of being very ambitious if it does indeed proceed with developing an Institute, and concerns over whether it can indeed be that ambitious;
- The need for the ITU to prioritise other more pressing challenges rather than spending time and resources fundamentally to restructure a capacity development and training programme that is performing adequately;
- Recognition that the ITU is not an academic organisation (although it does have academic membership) and doubts over whether it should therefore really be trying to develop an Institute;
- The challenges in making its capacity development and training activities scalable, especially at the present time when states are grappling with resolving crises caused by the COVID-19 pandemic; and
- Recognition that there are many other organisations providing very high quality capacity development and training, and that it would be difficult for the ITU to compete with these.

Demand for an ITU Institute in the context of existing global provision

96. Section 8 has provided a succinct overview of the many existing opportunities available to states and individuals to gain capacity development experiences and training opportunities other than through the ITU. This showed that:

- Much of the ITU's existing training overlaps with provision provided by others; the ITU draws on some of this external provision and makes it available to members through partnerships and other arrangements;

- The main areas where other entities cannot readily provide relevant capacity development are in enabling ITU member states to participate effectively in its mandated areas of global responsibility, particularly through ITU-R's role in the global management of the radio-frequency spectrum and satellite orbits, and also to a lesser extent ITU-T's role in supporting the development of international standards;
- The areas of greatest competition, but equally of potential collaboration, are in the capacity development and training offered by BDT;
- Many participants opt for ITU training in preference to that provided by other suppliers because it represents good value for money, it is seen as being politically neutral and unbiased, the ITU's certificates are valued, and its training is of adequate quality; and
- High quality capacity development and training can be delivered by many different kinds of organisation and does not necessarily require a formal Institute for its creation and delivery.

97. These observations have significant implications for the ITU's provision of capacity development and training and thus any demand for an Institute. Among the most important of these are that:

- All capacity development and training that the ITU delivers or facilitates must be of the highest quality – it should always strive for excellence, and never be satisfied with just being adequate;
- Its fundamental focus must be based on the ITU's core competitive advantages;
- It needs to minimise the potential risks to the ITU's reputation so as to ensure continued viability of its capacity development and training activities in an increasingly competitive world;
- It must ensure continued and effective delivery of capacity development and training in the areas for which it is uniquely suited; and
- It needs to allocate its limited resources to areas of capacity development and training where it can have greatest impact.

What kind of an Institute?

98. The above observations about demand and their implications give rise to two fundamental considerations in the context of any decisions that might be made about a future ITU Institute: whether it should be virtual or real, and how broad its remit should be. These are both discussed in more detail later in this section, but the next two paragraphs provide a brief introduction to the positions taken on each of them in this review and in its final recommendation so that these may act as a guide to what follows.

99. First, there have been mixed opinions for many years about the value and meaning of virtual institutes, not only in the academic and practice based literature,[138] but also among those interviewed for this review. On balance, this report supports the notion that the term Institute should be reserved for a **physical entity of substantial size,** especially in the context of the ITU, for three main reasons, although others are also addressed later in this section:

- The term "Virtual Institute" is often (but definitely not always) used rhetorically to give a sense of importance to something that is small or of little substance ; if the ITU is to have an Institute it should have something that in contrast is substantial and of the highest quality;
- The recent JIU report on academies within the UN system is clear on its recommendations about the need for consistency and clarity in terminology, and is critical of the proliferation of virtual entities; and
- The ITU already has a virtual Academy, and there would seem to be little point in creating a Virtual Institute to replace it.

[138] For contrasting view, see for example Jin, Z. (1999) Organizational innovation and virtual institutes, Journal of Knowledge Management, 3(1), 75-83, https://www.emerald.com/insight/content/doi/10.1108/13673279910259420/full/html; Helmholtz Virtual Institutes https://www.helmholtz-berlin.de/projects/hvi/index_en.html, Rang, A. (2017) Could 'virtual institutes' boost academic research?, *Medium*, https://medium.com/e-residency-blog/could-virtual-institutes-boost-academic-research-117ddb036828,

This is not, though, to suggest that an Institute should be without any virtual elements, and it does not imply that all training in a "real" Institute would be done face-to-face. Much of any future Institute's output would indeed be virtual, especially following the recent developments in online learning that have been accelerated through the experiences of COVID-19. Moreover, a "real" Institute need not imply that all staff should necessarily be employed in a single location, although this report argues that there are beneficially synergies if many of them indeed are.

100. The overall breadth of remit for any Institute is also an important issue for consideration. This report recommends that any Institute should in the first instance **concentrate primarily on institutional and organisational capacity development and training** delivered by its staff to member states**.** This choice is based on three main premises:

- That the ITU has limited resources available for capacity development and training, and must therefore make choices on where it should prioritise its efforts;
- That it is better to focus on doing a few things well, rather than trying to do too many and failing to deliver any of them satisfactorily in attempting to do so; and
- That there are already many activities by other entities of many types to deliver digitally related capacity development and training to individuals across the world, and many of these are better suited to such activities than is the ITU.

Moreover, if the decision is taken that the ITU should provide access to, or deliver, individual-level capacity development, this could be provided through other means external to the Institute. In addition, an Institute might develop online courses for wider individual use at some future date. This also requires further consideration of the balance between capacity development and training actually delivered by ITU staff and experts and those activities that it merely facilitates. The priority for an Institute should be on the former.

9.2 The UN experience with Institutes

101. Other UN agencies have considerable experience of creating and managing Institutes of various kinds to deliver on specific tasks within their remit. This is not especially frequent, although UNESCO in particular has made considerable use of such a policy. This section therefore provides an overview of some of these UN experiences with Institutes as context against which to consider the benefits and challenges should the ITU decide to create its own Institute.[139] The focus is specifically on "real" Institutes,[140] and not those that just use the term "Institute" to refer in effect to a small virtual entity. It draws specifically on the work of the UNU (United Nations University), UNESCO and the ITCILO, and also notes the ambitious new WHO Academy.

The United Nations University (UNU)[141]

102. The UNU is a global think tank and postgraduate training organisation, headquartered in Tokyo (Japan) and currently consisting of 14 Institutes located in 12 countries. These Institutes vary considerably in size and funding and focus on very different areas of activity,[142] but they all conform to a similar structure. Each Institute has its own Advisory Board, although the Institute Directors report directly to the Rector and not to the Advisory Board. The overarching governing board is the UNU Council which is composed of the UNU Rector (who is also an Under-Secretary General of the UN), 12 appointed Council members (serving in an individual capacity), and 3 *ex officio*

[139] There is some overlap with the previous section where the ITCILO is both a training provide and a Centre (acting similarly to an Institute). This section, though, focuses on the institutional structures and issues, whereas the previous one focuses especially on the training and platform issues.
[140] "Real" is used to refer to physical entities, with substantial numbers of staff, and that are at least to some extent autonomous of their "parent" agency, with their own Boards.
[141] https://unu.edu.
[142] Ranging from Comparative Regional Integration Studies (Brussels, Belgium) and the World Institute for Development Economics Research (Helsinki, Finland) to the Institute in Macau (Macau SAR, China) and the Operating Unit on Policy-Driven Electronic Governance (Guimarães, Portugal), the latter two of which focus especially on aspects of digital technology.

members (the UN Secretary General, the UNESCO Director General, and the UNITAR Executive Director). Its linkages with other UN educational and training entities make it particularly pertinent for this review.

103. Each of the UNU's Institutes has been encouraged to become a centre of excellence in its own particular field of research. Rather than being too diffuse, these centres have focused on identifying their comparative advantage and using it to develop the highest possible quality of research and training in that specific niche. Particular emphasis has also been placed on ensuring financial security, which enables both stability and independence. The agreements with hosting countries are complex and differ from each other, but in general the UNU requires a start-up sum of c. USD 35-45 million as an endowment for an Institute. However, this only generates an income of between USD 1-2 million a year, which is only sufficient to employ around 7-8 core staff. On top of salary and running costs, it is also necessary to find funding for a physical building for an Institute, which usually needs to be provided by a host government. Another interesting aspect of the UNU is the variety of ways in which the different Advisory Boards function, because they are indeed only advisory and do not have any authority over matters such as finance. As noted above, Directors report to the Rector not to the Chair of their Advisory Board, and so it is critically important for the success of an Institute that Directors, Chairs and the Rector maintain effective and open channels of communication and agreement. Where this works well it can be very effective, but such governance structures can also be challenging, as discussed further below in other contexts.

UNESCO's Institutes

104. UNESCO has one of the most comprehensive structures of Institutes within the UN system, with 11 Category 1 Institutes, and 81 Category 2 Institutes and Centres.[143] It also manages an extensive programme of collaboration with universities which is administered through the UNITWIN/UNESCO Chairs programme that currently has more than 830 UNESCO Chairs and UNITWIN cooperation programmes in over 110 UNESCO member states.[144]

105. The UNESCO Institutes are varied and complex in their governance structures and fields of activity, in part depending on the prevailing structures in place at the time that they were established. However, in broad terms the operational budget in the 2018-19 biennium for its 7 education Institutes totalled USD 75.8 million, the ICTP USD 54.8 million, and the UIS USD 22.0 million (based on an appropriated budget of USD 595.2 million[145]).[146] This emphasises the considerable cost of running fully-fledged Institutes. Many of the Institutes also have to gain substantial amounts of extra-budgetary resource to deliver their agendas and missions. Thus, in an Institute such as the IUL,[147] only around 10% of the total staff of 50 are actually paid as UNESCO regular posts, with the salaries of the vast majority coming from other sources. The funding arrangements for UNESCO Institutes are complex, but Category 1 Institutes have core funding from the UNESCO budget agreed at the General Conference, and then seek additional voluntary contributions and also try to gain extra-budgetary project funding.[148]

[143] The Category 1 Institutes are: UNESCO Education Institutes and Centres - the International Institute for Education and Planning IIEP (Paris and Buenos Aires), the International Bureaus of Education IBE (Geneva), The Institute of Lifelong Learning UIL (Hamburg), the Institute for Education Technologies in Education IITE (Moscow), The International Institute for Capacity-Building in Africa IICBA (Addis Ababa), the International Institute for Higher Education in Latin America and the Caribbean IESALC (Caracas), the International Centre for Technical and Vocational Education and Training UNEVOC (Bonn), the Mahatma Gandhi Institute of Education for Peace and Sustainable Development MGIEP (New Delhi); UNESCO Science Institutes and Centres – the UNESCO-IHE Institute for Water Education (Delft), and the International Centre for Theoretical Physics ICTP (Trieste); and the UNESCO Institute for Statistics UIS (Montreal). http://www.unesco.org/new/unesco/about-us/where-we-are/institutes-and-centres/.

[144] https://en.unesco.org/themes/higher-education/unitwin. Academic collaboration with UN agencies lies beyond the remit of this Report, but useful lessons could be learnt from this programme of relevance to any proposed reorganisation of ITU's CoE network as well as its wider relationship with academia.

[145] For this biennium, an alternative total appropriated budget of USD 518m million was also presented because of the financial uncertainties, which had commensurately lower operational budgets for the Institutes.

[146] UNESCO (2018) *39 C/5 Approved Programme and Budget 2018-19, First Biennium of the 2018-2021 Quadriennium*, Paris: UNESCO.

[147] IUL (2014) *Medium-term Strategy 2014-2021: Laying Foundations for Equitable Lifelong Learning for All*, Hamburg: UNESCO Institute for Lifelong Learning.

[148] UNESCO's Category 2 Institutes are fully funded by host countries, with local staff, and they contribute also to UNESCO's mandate and programmes, including doing much capacity development work.

106. Some of UNESCO's Institutes were established as a means through which a particular member state that wanted to contribute to UNESCO's broad mission, could do so by focusing on a specific area of interest to them. Germany, for example, with its longstanding interests in vocational training and lifelong learning has established one such Institute on each of these themes in Hamburg (UIL) and Bonn (UNEVOC[149]). The IIEP in France, likewise, has funding from the French government for their building, but no core funding for its operational budget. Much of its revenue comes in practice from contracts with other agencies to deliver specific projects. The ICTP has a different model again, with a campus just to the north of Trieste supported by the Italian government, where for 56 years it has worked to provide relevant professional learning and skills for more than 140,000 scientists from developing countries, mainly through face-to-face training, but also more recently through distance-based activities.[150]

107. The main advantage of these Institutes is often seen as being in their size, reduced levels of bureaucracy, and relative autonomy, not least financially, which mean that they can be more agile and flexible in delivering their missions through high quality research and capacity building activities. As was noted during the interviews for this report, donors often like such Institutes because they tend to have real practical expertise and can usually deliver more quickly and efficiently than the parent agency. This, though, can also give rise to tensions when a donor prefers working with an Institute rather the parent agency.

The ITCILO[151]

108. The ILO's International Training Centre (ITCILO), although called a "centre" acts in very similar ways to the Institutes of other UN agencies, and is therefore included here to provide a further example of the diversity of models that can be drawn upon. As noted above with the ICTP and the UNSSC, the government of Italy has been eager since the origin of the UN to establish Institutes, and the ITCILO is another example. Founded with the ILO in 1964 in a riverside park in Turin, its mission is to achieve decent work for all women and men.

109. Its campus location (as with UNESCO's ICTP) has in the past meant that it has been able to accommodate learners for face-to-face training at much cheaper rates than could be offered through the use of hotels. However, with an increasing shift towards online learning it is having to work creatively to identify alternative uses for such facilities. Its core funding has continued to come from the ILO and the Italian government, but the World Bank, European Union, development banks, foundations and other governments (especially Portugal, Ireland and Japan) also provide financial and technical support. A Board of 24 members is appointed by the Governing Body of the ILO, with half being government representatives and half being split between employers' and workers' organisation representatives. The Government of Italy, the region of Piedmont, the city of Turin, and the Unione Industriale Torino are also represented.[152]

The WHO Academy[153]

110. The government of France and the World Health Organization announced in June 2019 their ambitious aims to create the WHO Academy in Lyon.[154] This is intended to transform the digital and hybrid learning space for health to support delivery of the competencies necessary for achieving health for all by 2030. A state of the art campus is to be constructed in Lyon that will co-ordinate learning spokes "in all six WHO regions to deliver high-quality, multi-lingual, hybrid and personalised digital learning with a cutting-edge simulation centre for health emergencies".[155] It is intended to provide capacity development and training to leaders, managers, researchers, health workers and community organisers in the public and private sectors,

[149] https://unevoc.unesco.org/home/.
[150] https://www.ictp.it/.
[151] https://www.itcilo.org.
[152] ITCILO (2018) *International Training Centre of the ILO, Turin, Italy: Basic Documents*, Turin: ITCILO. https://www.itcilo.org/sites/default/files/inline-files/BASIC_Docs_EN%202018%20ALL.pdf.
[153] https://www.who.int/about/who-academy.
[154] https://www.who.int/news/item/11-06-2019-collaboration-between-france-and-who-to-realize-the-vision-of-the-who-academy.
[155] https://extranet.who.int/dataform/upload/surveys/961382/files/Concept%20Note%20WHO%20Academy.pdf.

and has ambitious goals of enhancing the competencies of more than 10 million people through digital and hybrid learning by 2023, and 60,000 per year through onsite training. Interestingly, the only statement about financing in its 2019 concept summary was "WHO explored potential financing models for sustainable open-access learning supported by learning subsidies, education tokens and differential pricing for customised services, drawing lessons from open-access journals, educational cryptocurrency and crowdfunding. According to the outcome of the analyses the financing is secured and enables every stakeholder to benefit from the academy".[156] The WHO Academy is not a separate legal entity, but is being established as an internal WHO division, headed up by a Chief Learning Officer at the level of Assistant Director-General, under the management authority of the DG. Interestingly, the WHO's Programme Budget for 2020-21 makes no mention of the WHO Academy.[157]

The potentials and challenges of Institutes

111. These examples illustrate that the character and role of Institutes within the UN system vary considerably, but three important conclusions can be drawn from them that are relevant for this report. Were the ITU to create a separate training Institute, the most careful attention would need to be placed on: balancing the financial challenges, opportunities and risks; ensuring an appropriate governance structure; and managing the fabric of an Institute.

112. **The financial challenges, opportunities and risks.** The more financial independence that an Institute has, the more likely it will also have greater flexibility, because it need not be tied tightly to the bureaucracies and constraints within its parent agency. However, this can also be a source of tension, either when an Institute gets into financial difficulty and the parent agency has to bail it out, or when expected core funding from the parent has to be cut, as when a government decides to withdraw its membership of the agency. When Institutes are well-led and able to attract substantial external funding through successful project-based tendering or providing services to other organisations, they can be very viable. However, this requires a substantial amount of effort, a well-established reputation based upon high quality activities, excellent networking skills, and a focused area of activity that is currently in demand. Not all of these are to be found in every UN Institute, and their viability is therefore not always assured. This is especially so for newly founded institutes without a sufficient endowment or guaranteed long-term funding to develop sufficient critical mass to be viable.

113. **Governance structures.** UN Institutes are both part of, but also distinct from, their parent UN agency. This provides useful opportunities for wider international engagement and flexible innovation, but it can also present problematic governance challenges. Opportunities include the ability to attract new networks and external contributions and insights from members of a Board, and to have the flexibility to respond positively to new externalities that their parent agency might not readily be able to adjust to. However, tensions can easily arise between the direction in which a Board might wish an Institute to travel, and the central mission and direction that the parent agency might insist upon. Much depends on the level of independence in financial arrangements and policy that an Institute and its Board are given by the parent agency, and these vary considerably between agencies. Balancing autonomy and control, especially in the governance context is very important. It is crucial for success that there are mechanisms in place through which agency heads, institute directors and chairs of boards can work together constructively and creatively in the best interests of the agency and its institute.

114. **Buildings and campuses in an increasingly virtual world.** Even before the advent of COVID-19, the increasing costs of face-to-face training, and rapid improvements in online distance-based learning were providing growing challenges for campus-based institutes. This applies as much to universities as it does to international agencies and other types of learning and research institutes. Indeed, the management and appropriate costing of "space", in the sense of offices, teaching rooms and accommodation are critical in ensuring that they are used efficiently and effectively. Many traditional universities, for example, have large amounts of their space unused for much of the year, and rarely is this "waste" appropriately costed into their business models. Similar challenges

[156] https://extranet.who.int/dataform/upload/surveys/961382/files/Concept%20Note%20WHO%20Academy.pdf, p.16. However the French government has subsequently announced funding of some €90 million for the Academy.
[157] WHO (2019) Programme Budget 2020-2021, https://apps.who.int/iris/rest/bitstreams/1262889/retrieve.

arise with other types of Institute, especially ones that are campus based, because all too easily the business of managing the accommodation and other buildings can become seen as being more important than the actual research and learning that they are meant to support. The recent COVID-19-related conversion of virtually all previous face-to-face training to online learning has created immediate added financial challenges for such campus-based institutions. Moreover, in the longer term it seems highly likely now that staff in such entities have learnt better how to deliver effective training online, that such forms of capacity development will replace much of what was previously taught face-to-face. COVID-19 has therefore considerably reinforced and accelerated a trend that was already taking place. That having been said a counter-trend is that many people are missing the physicality of being together, and so some face-to-face training and other activities may become increasingly valued in the future.[158] Getting the appropriate balance between these two contrasting tendencies will be crucial for the flourishing of successful Institutes and training organisations. Part of the answer to this will lie in creating high levels of flexibility, both in terms of the systems of human interactions within an organisation, and the physical fabric that facilitates these.

115. Another important factor facing all UN agencies in the future will be the changing working styles and requirements of staff. There is no doubt that COVID-19 has made individuals and organisations realise that traditional office spaces and working environments are likely to change fundamentally in the near future. This has implications for all usage of space by the ITU, and especially how to cost the creation of any new Institute. It is important for organisations to have clear understandings of the usage and thus cost of each type of space that it manages. As noted above, many UN Institutes have their buildings funded by host countries, and breakdowns of these costs are not readily available, but even in such circumstances it is important for organisations to have a notional cost of their floorspace, and the uses to which these costs of space are allocated. The costs of any new Institute must take such figures into account, and generic figures can be used to calculate estimates in the absence of alternatives. In the 4th quarter of 2019 for example, the average rental price of prime office properties in Geneva was EUR 644 per sq. metre per year, compared with figures for Paris of EUR 865, and Warsaw or Budapest at EUR 300.[159] Put simply, having an Institute in Budapest would mean that it could be twice the size as one in Geneva for the same price.

9.3 The strengths and opportunities for an ITU capacity development and training Institute

116. Four main strengths and opportunities underlie the case for an ITU Institute, although their precise significance varies according to the type of Institute that might be created, and many of them could also be achieved through other options:

1. **Clarity of purpose**. Creating an Institute, of any kind, would undoubtedly provide greater clarity in the minds of members, participants and the wider international community of the ITU's commitment to capacity development and training. It would also offer the potential of clearer and more focused delivery, reporting and evaluation.
2. **Centralised co-ordination and delivery of capacity development and training**. The creation of an Institute would provide an opportunity to integrate all capacity development and training activities in a single entity that would help to ensure quality and uniformity of brand delivery across the ITU as a whole. This would help overcome the present somewhat diffuse design and delivery and lack of overall co-ordination and direction. It should also enhance quality.
3. **Staffing: crafting a community of valuable expertise**. It is essential for the ITU to increase the number of appropriately trained staff involved in the design and delivery of its capacity development and training offerings.[160] An Institute could also help to build a community of internal and external expertise, not least

[158] It should also be noted that some training activities, particularly those that are practical-based, remain more easily understood if learnt in face-to-face real practical contexts.
[159] https://www.statista.com/statistics/431672/commercial-property-prime-rents-europe/.
[160] As noted above, an alternative way to do this would be to become purely a brokering or partnership convening entity, rather than delivering any of its own training.

through the invitations of visiting academics and professionals to spend time working with relevant ITU staff in delivering materials and courses.

4. **Symbolising a commitment to capacity development and training**. The creation of an impressive new, state-of-the-art physical Institute, would be a powerful symbol and global statement of a host country's and the ITU's commitment to capacity development and training. However, it must be asked whether the level of expenditure required for a physical entity, as for example for the WHO's ambitious new Academy in Lyon, indeed represents the optimal use of the resources of any UN agency.[161]

9.4 Challenges in creating an ITU capacity development and training Institute

117. Set against these potential benefits, there are nine specific challenges that would need to be overcome should the ITU wish to develop its own capacity development and training Institute.

1. **Governance structures**. Section 9.2 above on Institutes within the UN system emphasised the complexities and difficulties that can be encountered within such Institutes, even where initially sound governance structures are in place. These relate in large part to the role of Boards, and whether they are merely advisory or also have some supervisory functions. The extent to which they are also financially independent is another important issue. On balance, and given the fact that the ITU does not yet have in place a governance structure that would permit the creation of quasi-independent Institutes, the governance challenges associated with them would suggest that the strengths would need very much to outweigh the other challenges for such an option to be pursued.
2. **Financial implications**. The high level of funding that would be needed to establish an Institute may not be available, especially in the present economic climate. Resourcing is considered in more detail below, but complex decisions would need to be reached over the extent to which any Institute were to be financially independent, and how it might generate revenue, especially in a context where members of the ITU are used to receiving much of their capacity development and training at no, or little, cost. There is little point in trying to develop an Institute unless the full financial costs can be assured in advance.
3. **The shift towards online training, especially following COVID-19**. Much, if not most, capacity development and training will in the future be delivered online. Some activities will remain face-to-face, and the informal training associated with conferences, events and other networking activities may well actually become even more valued. Given the significantly increased use of online methods, and the likelihood that more face-to-face training will be delivered at national and regional levels, the case for creating a physical entity in a single location may not be particularly compelling either at the current time or in the foreseeable future.
4. **Global competition in capacity development and training**. As highlighted throughout this report, the field of capacity development and training in digital technologies and telecommunication is already crowded, and it is becoming more so. Other realistic scenarios (Annex 7) alongside the observation that much of the activity at present in this field under the ITU's aegis is actually delivered by partners or hired experts, suggest that it would take some considerable appetite and effort to build a comprehensive high-quality Institute as part of the ITU that could compete effectively in this arena.
5. **Managing a physical presence**. The costs and complexities associated with managing a physical Institute are considerable. Moreover, the shift away from face-to-face training as a result of the probable lasting impact of COVID-19, is likely to cause considerable readjustments in pre-existing and future Institutes of this kind. It is not necessary for an Institute to have a campus and accommodation, but host countries are often eager to provide such a facility. The ambitions captured in the announcement in 2019 that France would support the creation of a WHO Academy in Lyon now seem more challenging in the light of subsequent events.[162]

[161] In early 2020 France announced that it was pledging $90 million to support the creation of the WHO Academy, but substantial additional funding from other sources will also be needed for it to be successful, https://www.who.int/news/item/24-02-2020-france-pledges-us100-million-for-who-academy.

[162] https://www.who.int/news/item/11-06-2019-collaboration-between-france-and-who-to-realize-the-vision-of-the-who-academy. See also https://extranet.who.int/dataform/upload/surveys/961382/files/Concept%20Note%20WHO%20Academy.pdf.

6. **The terminology associated with Institutes and Academies**. An Institute is normally defined as being a term used to describe a large organisation that has a particular purpose, usually relating to science, education, research, or a related profession.[163] In most people's minds, an Institute is a large physical entity, that implies a building, staff, and resources, and that a training Institute also includes spaces for various forms of face-to-face training and/or gaining practical experiences. The recent shift to using the term "Virtual Institutes"[164] more loosely to describe small entities in grandiose ways has thus often been criticised, especially when there is little substance underlying it. The notion of an Institute, either real or virtual, is therefore not without controversy. The criticisms of UN Academies by the JIU applies equally to any use of the term Institute (and particularly Virtual Institute), especially when the UN system already has many physical Institutes within it.[165] This report therefore recommends strongly that the ITU should not create something small and virtual, and simply call it an Institute.
7. **Appetite of members and other stakeholders**. There are mixed views as to whether or not the ITU should proceed with the idea of an Institute; some are in favour, others are against. What is apparent is that there is no overwhelmingly uniform support for the notion that the ITU should create its own Institute. Some also recall the misfortunes of training Institutes that the ITU and UNDP created in the latter part of the 20th century (such as Afralti), many of which were then privatised, sold or disbanded.
8. **Choice of host country**. The choice of a host country can be a politically sensitive issue, depending on the countries that might be willing to support the Institute. It would also need to be located somewhere to which new high-quality staff would be willing to relocate, that would be easy for people from all over the world to gain entry visas to, would have excellent digital connectivity and support services, and would ideally not be amongst the most expensive cost of living duty stations.
9. **Loss of brand identity with Academy.** Several of those consulted commented that the ITU has already spent substantial time and effort building up the ITU Academy brand, and they were concerned that the creation of a new Institute might detract from the brand value already established. It would also be unwise in this context simply to rename the ITU Academy as an ITU Institute.

9.5 An ideal ITU Institute

118. There are many different options that could be suggested for what a possible ITU Institute might look like. At one extreme, it could be relatively small, building on the existing work of the ITU Academy; at the other extreme it could be a prestigious, expensive[166] and high-profile entity such as the new WHO Academy being built in Lyon.[167] Were the ITU to wish to proceed with its own Institute this report recommends that it should create a medium sized Institute, and there would be useful synergies with the ITU's headquarters and other UN agencies were it to

[163] See, for example, https://www.lexico.com/definition/institute.
[164] As with UNCTAD's Virtual Institute, https://vi.unctad.org/.
[165] it is also salient to note the recent JIU's report about the terminology used to describe Academies within the UN system in which it is noted that "the choice of designations, particularly for academies, seems to be made completely at random, in the absence of any clear criteria. Often there is no distinction between an academy and a centre, although the two categories may have the same main features of entities that other organizations call e-learning platforms"; Dumitriu, P. (2020) Policies and platforms in support of learning: towards more coherence, coordination and convergence, Report of the Joint Inspection Unit, Geneva: United Nations, p.16. The same logic can equally be applied to Virtual Institutes that are often no more than an e-learning platform; indeed, the same criticism can be applied to the ITU Academy as it is at present, which is a portal rather than an Academy. The JIU report goes on to state that "In view of: (a) the proliferation of learning services that exist outside the United Nations system, where universities and specialized learning organizations have helped create a highly competitive environment; and (b) the increasing demand for recognition, comparability and certification of newly acquired knowledge by United Nations staff, there is a need for a more rigorous use of such designations in an objective way, to give a clearer picture of the nature of the establishments and of their products"; Dumitriu, P. (2020) Policies and platforms in support of learning: towards more coherence, coordination and convergence, Report of the Joint Inspection Unit, Geneva: United Nations, p.16.
[166] Its precise budget is unclear, but it is reputed to be in the order of USD 100 million.
[167] WHO Academy, https://www.who.int/docs/default-source/documents/who-academy-brochure-r6-en.pdf?sfvrsn=73257a0c_2. The WHO Academy model is based on the following six points:1. A single platform for learning, globally accessible and offline capable; 2. Targeted and tailored multilingual learning for individuals and teams, customizable to user needs; 3. Measurable impact based on outcomes and learning analytics, adapting courses to improve over time; 4. Accredited courses ensure quality with verifiable credentials; 5. Co-created courses built in tandem with users based on specific needs; 6. Learning built to scale – WHO reach can ensure global access for millions of users

be situated in a building within the Geneva area. It should focus mainly on developing and delivering the ITU's own capacity development and training activities.

Objectives

119. The overall objective of the Institute would be to develop and deliver the highest possible quality and relevance of capacity development and training for the governments and regulators in the member states of the ITU. The report recommends that it would have five more specific objectives:

- Excellence in provision of high-quality resources and modalities for learning;
- A focus primarily on supporting the institutional and organisational needs of ITU members states to implement appropriate uses of digital technology and telecommunications;
- Concentration on delivering effective and appropriate learning and development outcomes that serve member needs, rather than on digital inputs;
- Collaboration in partnership, especially with UNDP and other UN agencies[168] as well as the world's best universities; and
- Being highly flexible and able to adjust to rapidly changing contexts, needs and digital innovation.[169]

Staffing

120 To achieve these objectives it would be necessary to appoint a team of high quality, experienced and committed staff to develop and implement the Institute. The report recommends that in the first instance there should be a minimum of 15 core staff, rising to around 25 after five years.[170] This is the minimum initial staffing level that would be required to make a success of the Institute, and guaranteed funding for it would be essential from the beginning. The staff of the Institute would mostly be drawn from those with expertise in delivering capacity development and training in the field of ICTs and telecommunications, especially (but not exclusively) through online environments. Some would be drawn from existing staff within the ITU, and an essential element of the Institute's work would be to develop close collaborative and supportive relationships with colleagues in all three Sectors of the ITU as well as the General Secretariat. Not all of the staff would need to be based within the Institute, and there could be value in having some staff located within regions and contributing virtually to the Institute's work. An alternative, might be to have some ITU regional staff also specifically affiliated within the Institute with a commitment of perhaps 10% of their time allocated to its work.[171]

Fabric and location

121. Identifying the precise location for a potential Institute is a critical requirement, and much would depend on the generosity of an appropriate host government. A review of currently available properties in the Geneva area, for example, suggests that suitable properties might be found for CHF 13-15 million. The fabric, style and location of an Institute is crucial for the productivity of its staff and the image of excellence that it would seek to convey. It is also likely to be important that, as an Institute, it has a distinct entity, separate from the main ITU building. Using estimates of the office space required for particular academic functions, it is possible to calculate an approximate footprint for a new Institute.[172] The basic space for the proposed staffing and functionality would

[168] Especially UNDP
[169] To this end, would work closely with the ITU's I-CoDI initiative
[170] One possible staffing structure, including the main teams involved is: Directorate (Director D2, Executive Assistant G7); Quality Assurance (Head of QA P5, QA officer P2); Needs analysis and membership liaison (Head P4, Admin G6); Course design and delivery (Head P4, Senior Course designer P3, Course designer P2 x 2); Partnerships (Partnerships and brokering officer P4); Alumni relations (Alumni support officer P2); Digital support (Senior programmer P3, Junior digital support P1); Marketing and external affairs (Marketing officer P3)
[171] This is deliberately less than the 14% of time noted in the regional review as being allocated to capacity development and training activity.
[172] Based in large part on the comparative data in UCL (2018) UCL Space Standards Guidelines, https://www.ucl.ac.uk/estates/sites/estates/files/ucl_space_standards_guidlines_v2-181002.pdf, which includes benchmarking

require a minimum of approximately 508 m^2,[173] but to this would need to be added washroom facilities, corridors, catering, and space for other such uses. It is essential that the Institute should have the highest possible digital connectivity, with both good upload and download speeds. This connectivity should be planned for expected levels required at least five years after commencement. Costs of fitting out a high-quality recording studio, as well as provision of relevant digital technologies for staff and maintenance and regular updating thereof will also need to be taken into consideration. There are arguments both in favour of managing the Institute's digital infrastructure internally and of outsourcing it externally. On balance, the emphasis in similar organisations is increasingly moving towards external hosting and supply of services, but in developing more detailed proposals for a new Institute both options should be considered and evaluated for value for money. Regardless of the decision made, it is essential that all Institute staff are technically highly competent.

Governance

122. Having an effective and robust governance model for the Institute to function as part of, and yet distinct from, the ITU would be an essential element for its success. Key elements of this might include:

- The Director who would report directly to the ITU SG, who would be an ex officio member of the Advisory Board.
- An Independent Advisory Board for the Institute of 7-9 external people with widespread experience of delivering capacity development and training in the context of digital technologies, which would be led by a distinguished and high-profile chair. The role of the board would be to provide advice, and it should meet at least twice a year, with the Director also having monthly meetings with the Chair.
- The Chair of the Advisory Board would have quarterly meetings with the ITU SG.
- A Management Board consisting of senior staff in the Institute and a representative from each of the ITU Bureaux would meet at least six times a year and would be responsible for day-to-day oversight of the Institute's management.
- All financial matters would be reported directly to the ITU Council through the ITU SG, but quarterly reports would be submitted to the advisory board for information and consultation.

Impact areas

123. There are two alternative options for the main focus of the Institute: concentrating mainly on capacity development intended for governments (including regulators) of member states (organisational and institutional capacity development); or also including the development and delivery of resources directly to individuals (individual capacity development). The recommendation of the report is that an Institute should focus primarily on the former, but a more ambitious institute could also seek to address the latter. Much would depend on the availability of funding and levels of staffing. It is crucial that the model remains flexible so that it can evolve swiftly as demand changes. The ability to do this is a distinct advantage of an Institute. The most important factor in determining the impact areas should be a rigorous annual review of the needs of the ITU's members, and a process through which these needs are turned into appropriate, context specific learning materials and modalities. It would very much build on the existing strengths of the ITU in delivering capacity development and training, but would take these to new levels of excellence, and would seek to ensure that members were kept up-to-date with the latest developments across the digital technology sector.

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figures from various universities. See also UK Higher education Space Management Project (2006) Review of space norms, http://www.smg.ac.uk/documents/spacenorms.pdf.

[173] Individual offices for senior staff (10 x 15m^2 = 150 m^2), Shared office space for 7 units each of 2 people on average (7 x (2 x 7 m^2) = 98 m^2) , Shared offices for visiting "faculty" (5 offices for 2 people each) (5 x (2 x 7 m^2) = 70 m^2), Three learning spaces each for c.25 people (could also be used as meeting rooms; one could be a physical laboratory) (3 x (25 x 2 m^2) = 150 m^2), Large flexible lecture space/theatre for public events and meetings (could also be used for filming purposes) (150 x 0.6 m^2 = 90 m^2), Recording studio (c. 50 m^2).

124. **Institutional and organisational capacity development and training for government officials and regulators**. The core intended impact of the Institute in the first instance would be to provide training and support for governments and regulators in the following main broad impact areas:

- Working with and in the ITU – supporting the engagement of all members, and especially states (including regulators), with the core areas and practices of each Bureau's activities. In essence, such capacity development and training would be designed to have impact through enhancing the efficiency with which all members engage with the ITU secretariat.
- Enhancing the capacity development and training essential to each Sector – each ITU Bureau currently has different ways of working with members that in part reflect the technical requirements of their sector (Radiocommunication, Standards, and Development) (see paras 137 and 144 for more details on modality of working). The role of the Institute would in the first instance be to have impact in supporting this diversity.
- Impacting on the identified needs of states - a fundamental feature of an Institute would be to undertake regular and rigorous analysis of the needs of member states, and these would provide the basis for its annual workplans. As new needs arise, the Institute would need to be flexible enough to respond swiftly to them.
- Focusing on the ITU's unique contribution – the Institute would prioritise having impact in the areas in which it has a strong competitive advantage, particularly in those that are not provided for by other UN agencies (see paras 69, 97, and Annex 4). In areas of overlap with other agencies it should seek to develop appropriate and effective partnerships to deliver relevant capacity development and training to governments and regulators.
- Being at the forefront of the latest technological developments – the ITU is ideally placed (not least through its private sector and academia members) to be at the cutting edge of new technological developments, and should especially focus on providing regular capacity development and training updates for governments about them.
- Capacity development and training for governments to empower all of their citizens through digital technologies – the ITU can have greater global impact by strengthening governments' abilities to empower their citizens than by trying to do this across the world by itself.

125. **Impact through building the capacity of member states to empower individuals within their borders**. This report strongly recommends that the ITU's capacity development and training should primarily address the needs of its members, especially national governments and regulators. The final point above in para 124 nevertheless notes that another area where the ITU has potential to multiply its impact is by enabling and encouraging states to be able better to deliver potential development outcomes through digital technologies to those living within their borders. To do this effectively, not only requires attention to the role of digital technologies in increasing economic development, but also in mitigating the harms that they are used to cause, both inadvertently and deliberately. Above all, from a development and equity perspective (see especially SDG10) capacity development and training needs to be delivered to reduce the tendency for digital technologies to cause inequalities between those who are able to access and use them and those who are not. All capacity development and training should therefore seek to support digital inclusion and diversity. Some of the ways that such impact can be addressed are by:

- *Creating toolkits for governments on how to ensure inclusion* – such toolkits (and training in their use) could be of many different types, and must also be flexible enough to ensure that they are appropriate to the varied national contexts of members. Their core purpose would be to help governments better develop development outcomes of digital technology interventions for all of their citizens. Rather than the ITU, for example, providing its own capacity development and training courses to individuals, these toolkits would enable governments across the world to do so for their citizens. The ITU's impact would be through the multiplier effect of working with all of its member states across the world.
- *Addressing the ability of sector members to ensure diversity and inclusion* – the Institute could also specifically develop capacity development and training activities to help sector members (companies and

corporations) better understand and deliver on critical issues around diversity as well as the sustainable use of digital technologies (for example, ensuring provision for gender, disability/accessibility, migrants and refugees, ethnic minorities, out-of-school youth, and e-waste).

- *Creating basic learning resources as global public goods* – where the Institute identifies a need for high quality online learning resources, it could also develop its own free-to-end-user materials available to users online through its portal (recommended through CC BY SA licenses[174]).

Functions

126. The functions of the Institute would be closely related to its objectives and impact areas, but working closely with colleagues in the three ITU Sectors, staff in the Institute would:

- Develop and deliver the highest possible quality of resources and training relating to digital technologies and telecommunications for all members (primarily member states but also sector members) in areas not already supplied at a sufficiently high quality by other providers.
- Design and make available the highest quality free and accessible self-learning content for anyone to use at any time on topics not already supplied at a sufficiently high quality by other providers.
- Design and maintain a portal of the highest quality through which capacity development and training services are made available.
- Identify the best existing providers of relevant content and training, and develop formal agreements with them through which the ITU portal can be used to enable people to access such training (this applies at all levels from basic training through to higher degrees).
- Work closely across all sectors of the ITU to identify relevant capacity development and training needs and to co-design relevant learning resources and delivery modalities (including developing training resources from newly produced ITU publications).
- Where necessary craft formal partnerships with carefully selected and diverse partners to develop and deliver joint collaborative materials and training (especially with other UN agencies, notably UNDP for in-country delivery).
- Host face-to-face training activities where these are deemed to be necessary instead of online learning (perhaps 10-20% of all training).
- Host "distinguished fellows" from other entities (especially high quality universities) to provide an opportunity for them to engage in the ITU's work and contribute to the development of new resources (as well as possible development of degree courses with some ITU input), but also to bring colleagues (including academics and trainers) to the Institute from less-well-resourced backgrounds so that they can enhance their own skills and practice through working collaboratively with the Institute's staff.
- Convene high-level international meetings and events on capacity development and training in digital technologies and telecommunication.
- Be a learning organisation itself, and provide regular internal training for all of its staff (≤10% of their time) on improving their skills (also open to other ITU staff).

Modalities of working across the ITU

127. The Institute would be an autonomous, quasi-independent entity reporting directly to the Secretary General (para 122). Nevertheless it is of the utmost importance that it would work creatively and effectively with staff across all three Bureaux and the General Secretariat. These all currently have different modalities for providing their capacity development and training activities, and therefore initially it would be necessary to develop diversified modalities of working with each of them in support of their activities. Over time, though, it is intended that having a single Institute responsible for all of the ITU's capacity development and training activities would provide a more seamless and integrated service for its members. In essence, the

[174] https://creativecommons.org/licenses/by-sa/2.0/.

Institute would work primarily as a service function for members through collaboration with the expertise available in the Bureaux, and externally where necessary through partnerships (see paras 131-136).

128. The staff of the Institute would above all bring additional high-quality expertise to the ITU in the design and delivery of effective capacity development and training in the field of ICTs and telecommunications. They would be both subject area specialists and expert in delivering effective and appropriate online and face-to-face capacity development.

129. In the first instance, the Institute's leadership would need to identify and work with each of the Bureaux on how best they would like to work together to enhance the delivery of their existing mandated capacity development and training activities. Varying ways of working with the Bureaux to deliver each Sector's requirements include:

- *Improving existing modalities of delivery*. Where Bureaux wish to maintain their current structures and modalities of delivery, Institute staff could be invited to advise on alternative ways of doing so more efficiently and at higher quality, both for face-to-face and also for online capacity development and training. Over time, it would be hoped that the Institute would become seen as a valued and trusted partner, and new modalities could be developed collaboratively.
- *Delivering new modalities of delivery*. Where Bureaux are eager to identify new ways of delivering their capacity development and training, then staff in the Institute could work together collaboratively with them to develop and implement relevant such activities. This could be done in various ways including the following: the Institute simply providing advice to Bureaux staff; Institute and Bureaux staff co-developing the content and structure of activities, which would then be delivered by experts within the Bureaux; the Bureaux outsourcing most aspects of design and delivery to the Institute.
- *Developing entirely new aspects of capacity development and training*. A key benefit of having an Institute would be its ability to look across all areas of the ITU's work, and identify the needs for entirely new areas of capacity development and training. In such circumstance it would seek to draw on existing content expertise within the ITU, or draw on its database of training expertise to help develop such novel materials and modes of delivery.
- *Providing high quality training to relevant ITU staff in course design and delivery using online methods*. Many staff currently involved in designing and delivering the ITU's capacity development and training would welcome training and skills upgrading for themselves. A key role of the Institute would also be to provide them with such training so that they are more confident and better able to deliver high quality capacity development and training.

130. The Institute would also bring considerable added value to the ITU's capacity development and training activities through developing and implementing additional or improved services and functionality across the organisation as a whole, including

- Regular capacity development and training needs analysis of members;
- High quality and effective quality assurance mechanisms;
- Monitoring of development outcomes;
- Alumni relations activities (para 168);
- Horizon scanning for the sorts of capacity development and training that members are likely to demand five years ahead;
- Maintaining a register of expertise, especially (but not only) drawing on sector and academia membership; and
- Where relevant building partnerships with cognate bodies (paras 131-136).

Partnerships

131. This report has emphasised throughout that the field of ICT and telecommunication and capacity development and training is very crowded, and a key challenge for an Institute would therefore be to identify where it can best add value for ITU members and the UN system to this existing global provision. This section has noted some of the ways in which the Institute would be able to do this, but it would also be essential for it to build effective high quality partnerships with other providers. The team would need to walk a careful tightrope between collaboration and competition, whilst guarding and protecting its own key competitive advantages. In some instances it would be necessary to work closely with entities that have relevant expertise lacking within the ITU; in others it may be preferable to pass requests for specific training for which it does not have the capacity to another agency or partner.

132. The development of flexible relationships with other UN agencies, especially UNDP, as well as existing and potentially new Sector and Academic members would be an integral element for an Institute, which is one reason that there is a specified member of the team allocated to this. However, this dimension is one that could potentially be expanded much further to provide an element of cost sharing, potential risk reduction and enhancement in quality in delivery of capacity development and training.[175]

133. Before the word "partner" is used, the Institute should, though, have a clear and agreed understanding of what is meant by it, and have put in place a rigorous, detailed and enforceable partnership framework through which all of its partnerships are implemented. Such a transparent partnership framework would be essential so that all partners are completely aware of the expectations of being involved in such a relationship as well as the costs and benefits involved. However, this is also crucial for the ITU because of its reputation amongst some in other UN agencies as being an agency that focuses more on the promotion of private sector interests than on "developing countries" and the potential contributions of civil society.

134. Potential areas where the Institute could collaborate most effectively with partners include:

- Maintaining a register of approved partners that could be recommended to members enquiring about specific types of training.
- Developing joint capacity development and training activities, both generic and also tailored to specific member requirements.
- Developing a brokerage model (see Annex 7), whereby the ITU could guarantee a minimum number of participants for substantially reduced rates, or through which partners offered ITU members reductions in their usual training costs.
- Collaborative development of free online courses with other UN agencies in areas of mutual interest.
- Hosting partner training courses on the ITU platform.
- Working with national or regional implementation partners for face-to-face training.

135. The ongoing work between the ITU and UNDP indicates a strong willingness on both sides to collaborate in capacity development and training. The UN SG's *Roadmap for Digital Cooperation* has recommended that both agencies should work together in the field of digital capacity building, especially given the context where the UNDP claims to be "the thought leader of digital development".[176] The *Roadmap* does not provide a mandate for the creation of a new Institute but instead a "joint facility". Ongoing discussions with UNDP support an interpretation that such a joint "facility" would initially be very flexible, agile, and able to combine the strengths of both agencies together to deliver better development outcomes for the governments of member states. Were the ITU to create an Institute that developed high quality resources, the UNDP's unparalleled network of country offices and experience of practical development interventions on the ground would provide an excellent mechanism to ensure widespread diffusion of such resources in country, together with new opportunities to

[175] It can nevertheless be noted that invariably public-private development-focussed partnerships have not delivered well on these expectations, and often work out more expensive than other contractual relationships. They can also increase risk, because of failures within the partnership relationship, and they need not always improve quality. See partnership model frameworks such as: Tennyson, R. (2011) The Partnering Toolbook, 4th ed. Oxford: The Partnering Initiative (IBLF) http://thepartneringinitiative.org/wpcontent/

[176] https://digitalstrategy.undp.org/strategy.html.

deliver them where required in face-to-face sessions. Moreover, in places with unreliable connectivity and electricity the UNDP could help to ensure appropriate high quality infrastructure to enable participation in online training.

136. The Institute could also consider opportunities for staff sharing and secondment between different organisations. Although this report recommends that the majority of Institute staff should be co-located in a single place, one option would be for it to have a member of staff in some or all of the ITU's regions so as to ensure that it is grounded in regional contexts across the world. Alternatively, relevant UNDP regional staff could be invited to participate in relevant planning meetings and delivery activities.

Delivery methods

137. The Institute would deliver flexible capacity development and training using the most appropriate methods (whatever they are) for the learners: there is no one-size-fits all. It would nevertheless place particular emphasis on a combination of non-formal and formal capacity development, and would seek ways through which non-formal activities might be systematised. In the broadest of terms its delivery methods would include (with percentages being estimates of initial pattern as of 2021, although these would subsequently evolve over time):

- Online training courses (probably c.60-70%; including both tutor-led and self-paced)
- Face-to-face training (probably c.10-20%)
- Combination of online and face-to-face (10-20%)

Some of the face-to-face activities would be delivered in its own premises, but most would be delivered by staff, or those trained by staff, and local ITU and staff from other UN agencies (especially UNDP) in regional locations. The option of delivering specialised mentoring services would also be developed, and would fall within the broad breakdown of online/face-to-face as summarised above.

138. The ITU has traditionally placed considerable emphasis in its internally provided capacity development and training on its integration with regional seminars and workshops as well as through other forms of regionally-based activities. The extent to which these remain face-to-face or are largely replaced by virtual online activities in the wake of COVID-19 remains to be seen. In the short-term, online modalities will remain the norm until a resolution of the health threats associated with COVID-19 have been resolved, and the longer-term impact of these is also likely to favour online methods. Nevertheless, lockdown experiences of many people during 2020 and 2021 have also highlighted the great value that people also place in face-to-face meetings and training. Hence, some provision of face-to-face capacity development and training, as well as the informal opportunities provided by the ITU's regular programme of meetings and events will also remain important. A flexible Institute with expertise in both online and face-to-face training would be readily available to cater swiftly to changes in demand from members.

Intended beneficiaries and level of training

139. The Institute should be focused on institutional and organisational capacity development and the main intended beneficiary group would be staff in member state administrations and regulators, and thereafter sector and (academia) members of the ITU. It is imperative to note that the intention of the Institute would not be to duplicate existing high-quality and relevant training available from other providers, but instead to focus on the areas where the ITU has proven competitive advantage and relevance both within the UN system and more generally.

140. In terms of level of training, the main focus would be on professional training (from basic through to advanced). The Institute would not pursue the development of its own undergraduate or postgraduate training opportunities, since these are already widely provided by universities. However, should high-quality universities be interested in developing courses with some involvement (and branding) from the ITU this opportunity could be explored. To protect the Institute's brand, it should prioritise partnerships or collaboration with the most

reputable universities (such as those in the top 500 of the QS World Rankings[177]) and those with particular specialisms or in specific regions[178].

141. Nevertheless, should the Institute (or other colleagues within the ITU) identify a significant gap in global training provision for *individuals* to learn about particular aspects of its portfolio, the Institute's staff would also explore the opportunities of developing additional free and open learning resources to be shared through its portal. In the first instance, rather than developing full courses, it could prepare standardised templates covering the key issues that other trainers could then develop for their own courses at a national level. In exceptional circumstances, the Institute might develop entire courses in multiple languages for a global market, but it is anticipated that these would be rare.

Examples of outputs

142. The Institute's materials and resources would be developed in diverse ways, but they would generally follow a standard quality assurance process that would involve at least the following phases:

- Learning needs assessment
- Audience/participant for whom it is intended
- Learning objectives and intended outcomes
- Title, structure and content
- Mode(s) of delivery
- Learning materials and resources (multimedia)
- Ensuring appropriateness of those delivering the training
- Marketing of the course
- Assessment and certification (if relevant)
- Evaluation of learning outcomes (interfacing with alumni networking)

143. As many as possible of the Institute's materials and resources should be made available in a diversity of formats so that they are as inclusive as possible, and anything developed through public funding should be made freely available, possibly using Creative Commons licensing (if so preferably CC BY-SA[179]). The following seven main types of new activity are illustrative of what could be developed by the Institute (examples are for illustration only, and would be developed in participatory methods with relevant stakeholders):

- *Stand-alone online resources for self-paced learning*. These would be designed to be very intuitive, learner-friendly, and would include carefully designed quizzes for formative assessment. Most could be in modules of one hour duration.
    - An introduction to the ITU for staff from new member entities (Governments, Sector, Academia) (5 hours in total)
    - An introduction to crypto-currencies for mid-ranking telecommunication regulator officials (20 hours in total)
- *Face-to-face in country high-level workshops* (often with UNDP).
    - Two-day regional workshops for senior regulatory officials on the implications of spectrum auctions for development practice.
    - Two-day regional workshop: Mitigating the negative environmental implications of digital tech business models in East Africa
- *Online tutor facilitated training courses* (some with partners). These would be of varying length, but consisting of units that re usually of one hour duration, and not more than two hours a day. They could be certificated through assessment, or simply be learning without assessment.
    - Updates on latest telecommunication standards (3 days) (could be certificated if assessed).

[177] https://www.topuniversities.com/qs-world-university-rankings.
[178] It might consider working with one of the 5-10 top-ranking universities in each of its regions should these fall outside the global top 500. Care must be taken in choosing the universities with which the Institute might partner or collaborate.
[179] https://creativecommons.org/licenses/by-sa/2.0/.

- Digital challenges from the ground up in SIDS: telling it as it is to global corporations (2 days).
- Digital broadcasting (duration 20 days, 2x 2hrs per week, with additional self-paced learning)[180].

- *Mentoring programmes and groups*. Mentoring is acknowledged to be one of the best means of providing effective capacity development, and can be of many different types and duration, depending on time availability, needs and experience
  - Women participating in WTDC
  - Inclusion for senior management in the digital tech sector
- *High profile lectures and panel discussions*. A wide range of options is available under this heading, but could include:
  - Online/f2f monthly high profile lecture by distinguished figure – open to the public and could involve physical audience. Each Sector could convene its own monthly series.
  - Online topical panel discussions on key issues, bringing together very experienced speakers with more junior staff.
- *Practical training*. Some of the training provided currently by BR, for example, helps participants attending workshops/seminars gain practical skills at using software required for spectrum allocation. Further practical training might also be developed both face-to-face but also online through the use of video and facilitator support.
  - An online participatory practical course in how to participate successfully in ITU Plenipot (including video, role playing exercises, quizzes)
- *Online resources (OER freely available).* The ITU generates many publications, beyond just its official ones. Short introductions to, and advice on how to use these, could be provided, as well as complete courses based on them. Examples based on recent publications include: [181]
  - How to access and interpret ITU statistics.
  - A resource on estimating connecting in crisis contexts based on *Estimating digital connectivity during the Covid-19 Pand*emic report.[182]
  - Introductions and advice on collaborative regulation based on *Global ICT regulatory outlook 2020 – pointing the way forward to collaborative regulation*.[183]

144. The following two vignettes briefly illustrate the processes that staff in the Institute might go through in developing such "outputs"

Vignette 1: Responding to a request from BR for practical training on spectrum monitoring in West Africa

Origin of request: BR has identified a need from members in West Africa for training in how to use the latest generation of spectrum monitoring equipment.

[180] https://academy.itu.int/sites/default/files/media2/file/Digital%20Broadcasting%20Masterclass%20Course%20Outline%2C%2030th%20Nov-24th%20Dec%202020.pdf

[181] The Institute would provide added value to these resources by curating them and including a sophisticated self-learning search mechanism in its portal so that members and alumni having specified their identity parameters could enter the portal and have details of the latest new resources added automatically on logging in, or even sent directly to their e-mail address. This could be in the form of automated messages such as "As an ITU member (or alumna/us), the following new learning resources on [subjects/topics with links] might be of interest to you based on your stated preferences and previous search history….]

[182] https://www.itu.int/en/ITU-D/Statistics/Pages/youth_home_internet_access.aspx.

[183] https://www.itu.int/en/publications/ITU-D/Pages/default.aspx.

Needs analysis: Institute staff discuss with relevant BR and regional ITU staff and members to identify the exact needs, their preferred delivery modalities, past experiences, level required, likely numbers to be trained, levels of funding, and other relevant information.

Review of existing provision: Scan of existing global provision of relevant courses and materials that might already be available; discussion with existing providers.

Identifying personnel to be involved: Scan reveals that Rohde & Schwarz (ITU member) already have excellent service support virtual demonstrations, and willing to be involved. Consideration of additional local West African entities (in both English and French speaking countries) who might be involved. Discussion over whether BR wish to be involved directly in development and delivery.

Optimal delivery mechanism: West African members would strongly prefer face-to-face training (because need to be hands on, and poor connectivity for some participants, especially from Niger and Mali), and are willing to cover local costs of trainers (probably deciding to hold Francophone meeting in Abidjan, and Anglophone in Accra).

Content development: Unit works with BR and members (including Rohde & Schwarz), including local UNDP teams in Côte d'Ivoire and Ghana, to develop content specifically appropriate for West African context.

Quality assurance: course materials and modalities go through internal QA processes (also involving BR) and are subsequently revised. QA also undertakes post-delivery review of programme.

Marketing: Unit working with members to attract participation (some of which would be non-ITU members who would be expected to pay and thus defray some of the costs).

Delivery: as requested delivery as two 3-day workshops hosted by UNDP in their Accra and Abidjan offices (filming relevant parts).

Options for repurposing: consideration and agreement among team of value in turning this training into a basic free self-paced online learning resource on the ITU Academy (using video from above). Local contextualising (including language and imagery) undertaken in discussion with BR as to where most needed.

Cost-recovery: agreed structure in early stages – free service to members (as part of their membership), Côte d'Ivoire and Ghana covering local costs, UNDP supporting local costs (and free advice), additional participants contributing to costs, 50% staff time provided by unit, BR some funding, Rohde & Schwarz offers time for free.

Alumni management: participants required to share contact details and invited to join alumni group; contacted after 3 months, 6 months, and 1 year to learn how they have used their training, and to gain feedback on how it could be improved on subsequent occasions.

Internal review: training reviewed at nearest quarterly unit review meeting.

Vignette 2: Listening to the voices of SIDS: changing the power structures of Capacity Development and Training

Origin of request: Following a session on SIDS at WSIS 2021, representatives from governments of three Pacific and one Caribbean island states approached the team to ask whether they could help them to deliver a radical new form of capacity development for private sector companies, so that these companies better understood how to work in their territories and serve the needs of people living in SIDS.

Needs analysis: Unit convenes a detailed series of conversations with other SIDS to identify the precise issues they want addressing, the audience and the modality. Discussions are also held with potential Sector Member companies to see the level of likely interest. Agreed that this should focus on use of digital technologies for delivery of government services, especially health and education.

Review of existing provision: A swift review indicates that very little like this has been done before, and this could be the first in a new series of training activities provided by those for whom much previous training has actually been intended, thus reversing the traditional power relationships within capacity development.

Identifying personnel to be involved: leadership team from 3 Pacific and 3 Caribbean countries, colleagues from UNESCO, WHO and UNDP, UN SIDS and core unit team (possibly also some companies).

Optimal delivery mechanism: In discussion with stakeholders, it is agreed that this should be a three day (7 hours per day) online workshop, to be held twice, once in a Pacific time zone, and once in a Caribbean time zone. It would involve various participatory activities, include mind-mapping, small working groups using Jamboard (or equivalent), and role-playing exercises.

Content development: Unit working with knowledgeable people from SIDS, interested colleagues in BDT and ITU regional colleagues in Caribbean and Pacific, developing high quality content and resources.

Quality assurance: Internal QA process, but also reviewed carefully with some ITU private sector members to ensure appropriateness of materials.

Marketing: Initially mainly through ITU membership, but also global campaign under the banner "Do you know Sid? What global tech companies need to know if they want to work effectively in Small Island Developing States". Short videos of key issues disseminated one a week in lead-up to training.

Delivery: Online, 3 days in Caribbean time zone and 3 days in Pacific.

Options for repurposing: This could also be done live face-to-face – or in abbreviated form - in conjunction with upcoming UN SIDS meetings.

Cost-recovery: Much will depend on costs market will bear. Payment from private sector participants would be on option, although donor funding or sponsorship would also be feasible. In country/region work might also be sponsored in part by local companies and governments. Once costs are covered, then should be made available as free global online resource.

Alumni management: One option would be a group of companies committing to a more thoughtful approach to the needs of SIDS; additionally there would be value in creating a network among and within SIDS for sharing good practices and experiences – this could be led by BDT.

Internal review: training reviewed at nearest quarterly unit review meeting; lessons for the future identified; alumni regularly contacted about what they have (or have not) put into practice, and in the light of this how future training could be enhanced.

9.6 Links with existing ITU activities

145. The Institute is explicitly designed to build on the best of existing ITU practice, and to overcome the challenges that persist at present. The following areas of good practice would be incorporated and built upon within the Institute:

- **Cross-Sectoral collaboration**. By being "outside" the existing ITU Sector framework it would be easier to work collaboratively with staff in all Sectors, and it would be an outstanding resource upon which each Sector can draw.
- **Within region knowledge and expertise**. Regional offices are already helping the ITU better to understand the needs of members, and this important element would be built upon to help ensure that the Institute is demand-driven.
- **Existing collaboration with UNDP**. As noted above (paras 21 and 80), it would also be strategic to build on the well-established collaboration with UNDP, not only to ensure even better understanding of regional and national requirements, but also to help deliver training where relevant on the ground.
- **Drawing on thematic priorities of the ITU, and BDT in particular**. The recent restructuring of BDT into clearer thematic areas, and the existing relationships between them and the CSD should be carefully built upon to ensure that the Institute delivers high quality resources in each of the thematic areas.[184]

[184] See further on future of CSD below.

- **Relationships with members and partners**. The ITU brand and its staff are liked and generally well-respected. It is essential the new Institute builds on this, and enhances the overall reputation of the ITU.

9.7 Resourcing implications

146. This section provides an estimate of the level of costs involved in creating and running such an Institute, and summarises potential business models for delivering these.

The basic costs of the Institute

147. It is difficult to make precise predictions of the likely costs associated with the creation of a new Institute, but the following seem reasonable estimates based on the experience of other UN Institutes and standard capacity development and training requirements.

148. **Space.** The calculations below are based on what it would cost to rent space for a new Institute, on the assumption that the ITU would not want to purchase a property[185]:

- Offices and facilities = 508 m^2
- Additional 25% to cover corridors and facilities +127 m^2
- Total space requirement therefore c. 635 m^2
- This would equate to the following rental costs per year in different locations, exemplified by:
    - Geneva[186] CBD, Université (635 x €644) = CHF 408,940
    - Geneva[187] Champel. Florissant, Cornavin, Pâquis, PAV (635 x €450) = CHF 285,750
    - Budapest (635 x €300) = CHF 190,500

149. **Staffing.** The basic cost to the ITU of the 15 staff identified above (para 148) would be CHF 2,623,281 (based on ITU's Annual Average and Standard Costs).[188]

150. **Digital technologies and support.** An estimate can be made for costs of digital support (including hardware and software licences), based both on current costs of ITU expenditure and comparisons with other organisations:

- Digital technology initial costs, including very basic studio technology for filming and recording: = 15 x CHF 9174 = CHF 137,610
- Annual replacement/maintenance cost (assuming replacement over 3 years CHF 45,870 plus high-quality reliable connectivity CHF 10,000) = CHF 55,870
- Annual hosting and maintenance of platform (currently CHF 2,195 monthly, which represents very good value), but estimate CHF 2,500 per month or CHF30,000 per year.

Should it be decided that a new digital platform is also needed this could vary considerably in additional costs depending on the extent of redevelopment required, and whether support might be forthcoming from an ITU partner. In general terms, costs could be between CHF 50,000-100,000, but these are very variable depending on the requirements and supplier expertise. It should be stressed that an ITU Institute's platform would need to be the best within the UN system, and would need regular maintenance and development to ensure that it kept this status.

151. **Additional overhead and project costs.** Over and above these basic costs, there would be numerous additional costs, including travel, fellowships, hosting, and hire of external experts and consultants. These are

[185] Within the Geneva area a property (without the necessary refurbishment) could cost c. CHF13-15 m.
[186] Prices vary from 400-950 CHF/M^2/year
[187] Prices vary from 275-600 CHF/M^2/year
[188] Based on data kindly provided by ITU finance office for annual average and standard costs

likely to be highly variable depending on the precise functions take on by the Institute, but estimates can be gleaned from the standard overhead estimates used by the ITU.

Business models and cost recovery

152. Many types of business model could be explored by the Institute, with different sources of cost recovery being appropriate to the different elements of its activities. Seven of these are summarised below:

153. **Host country support.** Most UN Institutes are funded in some way through substantial and generous host country (and/or local government) support, that usually covers the costs of the use (rent/purchase) and maintenance of the property in which this Institute is housed, as well as a contribution to staffing. For the ITU to consider creating an independent Institute, it would be necessary for a host country to provide a property and also to cover basic staffing and running costs through an endowment of at least c. US$ 50 m,[189] or a commitment of c. US$ 2.5 m per year guaranteed for at least 5 years, and thereafter in 5-year tranches subject to satisfactory performance. The latter approach would provide substantially more income for the Institute given the current investment climate, but it would be subject to the risk of closure after only 5 years.[190]

154. **Additional contributions from member countries**. Many UN Institutes are also funded by additional contributions from member countries for specific things, be they events or buildings. Countries providing such additional contributions could be recognised in many ways, such as naming particular facilities (such as a recording studio or lecture space) after them, having their logos on all materials produced by the Institute, or convening annual named events and public lecture series.

155. **Funding from regular membership contributions**. Membership contributions to the ITU should be used to provide the basic day-to-day development and delivery of a core set of training resources for all members. Members expect that in return for their annual contributions they should receive certain services, one of the most important and visible of which is capacity development and training. There was widespread support among those consulted that the ITU should spend more of its budget on capacity development and training.[191] In return all paid-up members could be guaranteed a certain amount of specialist additional training (that would otherwise be paid for) for free, over and above the material made available freely to all online. Members might be willing then to pay additionally for further such training. This option would require a substantial restructuring of the ITU's current central support for capacity development and training which is estimated at only c. 2-3% of total expenditure.

156. **Joint financing with partners for specific projects**. Currently ITU projects are funded in part by partners, but the ITU also often contributes to their financing. Such arrangements could be continued, although it is essential that the Institute would have clear partnership principles and practices in place through which these could be delivered. The Institute together with partners could also tender for joint capacity development and training activities promoted by third parties such as multi- or bi-lateral donors and foundations. The development of new training courses to be made freely available online for self-paced-learning would be an exciting opportunity for the Institute to work collaboratively with partners, and especially with UN agencies working in cognate areas.

157. **Partner funding**. The relationships with partners for the delivery of capacity development and training within the ITU present a risk factor with respect to perceived bias, be it to a particular company, civil society organisation or a member state. Once comprehensive and transparent partnership protocols are put in place, though, another means of financing activities would be through the direct support of partners. Ideally, this would be through direct partner funding to the Institute, but this is hard to gain, and most usually partners contribute in kind.

[189] With the current very low returns on low-risk investment such a sum will not yield much. It is currently possible to get about 2% in 20 year US government bonds, or 2.5% in 30 year Chinese government bonds denominated in US$. This would only yield US% 1-1.25 m per annum.
[190] A $US 50 million endowment would only provide sufficient funding for about half of the expected staff of the Institute, the remainder of which would need to be supported through the ITU's annual budget.
[191] 53.8% of Study Group Chairs and Vice-Chairs definitely agreed with this.

158. **Charging direct cost price or reduced rates for capacity development and training**. Ideally, as noted above, all of the Institute's capacity development and training activities should be available for free to member state governments and regulators.[192] This may not always be practicable, and a question then arises as to the price at which other people (including non-members) should pay to participate in such training. It is essential that the real costs of designing, developing, and hosting every capacity development and training activity provided by the Institute is calculated on a clear systematic basis. Once these figures are calculated the Institute could estimate the number of people who need to be trained at what price to cover the costs, and then charge accordingly. It would then also be possible to explore differential charging so that those who can least afford to participate only have to pay a fraction of the total costs.

159. **Tendering for specific activities**. A further way in which the Institute could generate income is to tender for additional activities over and beyond its core business. This is an important means through which its numbers of staff, expertise and experience could be expanded, and this revenue could also then be fed back into the overall income stream for the Institute, thereby enabling additional staff to be employed. However, excessive focus on gaining such externally driven funding could detract from its core business in providing services to ITU members.

Section 10: Recommendations

160. Any longer-term future ITU strategy for capacity development and training depends heavily on the aspirations and decisions made by its members, and the wider political and cultural factors within the ITU. There are also important structural constraints, such as existing agreements with the CoEs as well as the need for any fundamental changes to be agreed through the ITU conference structures (Plenipot, WRC, WTDC, WTSA), that mean that any substantial changes may need to be implemented in stages over several years. Exit strategies for the areas that are no longer required would also need to be developed.

161. The following recommendations are based on the empirical evidence gathered through the review of existing practices within the ITU (section 4), the evolution of ongoing practices in other organisations (section 8), the opinions of stakeholders, and on existing good practices in the delivery of capacity development and training by other entities. It is also important to stress that the intent of making these recommendations is that the ITU should in the future go beyond the adequate and ordinary, and have the highest possible quality of capacity development and training that delivers on the needs of member states,[193] private sector companies, and civil society organisations.

10.1 Short-term recommendations

162. This section offers ten inter-related summary recommendations focusing on the main practical actions that should be taken within the next six months to enhance effective delivery of the ITU's capacity development and training. These are all actions that should be taken regardless of the actual longer-term recommendation that the ITU chooses. All relate to the ITU as a whole, but in many instances BDT would initially be the natural lead Sector in their implementation. The recommendations are important in themselves, but they also lay the foundation for the creation of a fundamentally different approach to capacity development and training for the ITU discussed in more detail in the ensuing section on longer-term recommendations.

Short-term recommendation 1: Coherent and holistic strategy and approach

163. **The ITU should develop an overarching formal strategy for its capacity development and training activities, both so that staff within the organisation are aware of exactly what they are working towards,**

[192] This, it should be noted, is not the same as saying that everyone living in all member countries should have free access to all of these resources.
[193] Taking note of the UN SG's Roadmap for Digital Cooperation process, https://www.un.org/en/content/digital-cooperation-roadmap/.

and also so that existing and potential users are very clear of what they can expect. Key elements that should be considered in developing this strategy include:

- It should establish clearly the dimensions of capacity development (institutional, organisational, and/or individual) on which the ITU is focusing.
- It should be ITU wide, involving all relevant Sectors and teams within the ITU (especially BR, BDT, TSB and the HR team in GS).
- It should commit to enhancing the overall quality of the ITU's capacity development and training delivery by adding focus, and ceasing activities in which it no longer has a competitive advantage.
- It should aim to work within the context of an overall budget of c. 15% of the ITU's total expenditure.
- The longer-term recommendations indicate one direction in which this strategy might be designed.

Short-term recommendation 2: Visibility and online presence

164. **The ITU should create a clear, integrated marketing and publicity strategy for all of its capacity development and training activities, not least to ensure that all material on its website (and associated portals) is up-to-date and accurate.**[194] This should include:

- A high quality single online access point to all information about the ITU's capacity development and training, to which all mentions of these on the ITU's main website are directed.
- A single person within the ITU should have responsibility for this digital presence, and they should have strong expertise in marketing.
- In developing the strategy, the ITU should build on the examples of good practice within this report, and seek to ensure that the new digital environment is widely recognised as a market leader in its field.

Short-term recommendation 3: Simplification and clarification of the ITU's capacity development and training offering

165. **The ITU should create a simpler and clearer framework for its capacity development and training offerings based on the purposes and outcomes of such activities, so that staff and external users can more readily understand these and the modalities through which they are delivered.** This should be based on the purposes and intended learning outcomes of the training, and this framework should focus on:

- Ensuring clarity of purpose of all capacity development and training and their development outcomes.
- A commitment to providing the highest possible quality of training at all times.
- Emphasising that the majority of future capacity development and training will be delivered online, whilst also recognising that certain types of training are best delivered face-to-face.
- Differentiating between formal and informal capacity development and training, and recognising that both are important.
- Appropriately phased cessation of activity in all areas that are no longer deemed to be delivering the highest quality, value for money, and relevance.

Short-term recommendation 4: A commitment to rigorous quality assurance processes

166. **The ITU should commit itself to a rigorous process of crafting high quality, effective and appropriate capacity development and training, so that learners can be assured that the provision is relevant, excellent, and will be of benefit to them and their organisations.** It is essential that the ITU adopts a clear emphasis on

[194] Since the commencement of research for this report, it is positive to note that progress has already been made towards this end.

the quality of learning outcomes, rather than the quantity of courses delivered. This commitment should require all such activities to include at a minimum:

- A rigorous analysis of the capacity development and training needs of its members and those for whom it is designing them.
- Clarity in the title and description of all such activities.
- Precision in the definition of learning objectives that should always be directly related to learning needs.
- Clear focus on content, structure, and high quality learning resources, as well as ensuring that the optimum delivery modality is used.
- Where relevant the involvement of high quality, training instructors and facilitators.
- Strong commitment to measuring real learning outcomes, and subsequent follow up with learners.
- Enhanced commitment to monitoring, evaluation and reporting of all capacity development and training activities.

Short-term recommendation 5: Improving the capacity of ITU staff to deliver high quality capacity development and training for its members and relevant others

167. **The ITU should put in place mechanisms for all relevant staff to become as well trained as possible in delivering high quality activities for member states and relevant others (see 4 above).** Learning organisations understand well the value of effective capacity development and training, and that to deliver such activities staff need to be well trained in their design, implementation and assessment. All ITU staff engaged in capacity development and training should themselves receive appropriate skills enhancement, and this should include:

- Gaps in learning provision for staff engaged in capacity development and training should be identified through ongoing discussion of their learning needs.
- High quality learning resources should be designed for staff in the ITU, so that they understand well what is required to deliver excellent capacity development and training (this might be done in collaboration with other UN agencies).
- All staff with any involvement in capacity development and training should undertake this training before they are permitted to engage in designing and delivering and such activities. Relevant senior management should lead by example in undertaking such training, not least so that they better understand all of the stages and processes involved in its delivery.

Short-term recommendation 6: Creating a dynamic and versatile alumni network

168. **The ITU should create a dynamic and versatile alumni network for anyone undertaking its courses, so that it (a) is well placed to be able to report on the real learning (and wider development) outcomes of those whom it trains, (b) creates a community of skilled alumni whose services and advice it can subsequently draw upon, and (c) builds a wider network of advocates for its capacity development and training activities.** This should involve:

- The appointment of a skilled alumni officer whose role is to implement such a network.
- Identifying and running the optimal online platform for the alumni network.
- Ensuring that the network above all serves the interests of the alumni so that they are eager to contribute to the ITU's continued work in this field.
- Contacting alumni in a regular and systematic rhythm to learn more about how their ITU-led capacity development and training has been used to deliver effective and appropriate development outcomes.

Short-term recommendation 7: Creating a budget line for all capacity development and training activities within the ITU

169. **A budget line should be created across the ITU for all capacity development and training activities, so that levels of expenditure and value for money can be identified and assured within all Sectors and across the Union as a whole.** Specific aspects that should be considered include:

- Ensuring that a single budget line is created within each Sectors' budget for capacity development and training, and that this can easily be aggregated to provide figures for the ITU as a whole.
- Staff are required to apportion the time that they devote specifically to capacity development and training (this may not be easy, but it is something that should be attempted).
- Procurement processes are regularly audited for all capacity development and training to include such aspects as age, gender, ethnicity, country and sector.

Short-term recommendation 8: The ITU Academy

170. **The continued process of enhancement of the ITU Academy platform should be continued apace, so that learners are better able to benefit from its functionality and so that it becomes a beacon of excellence within the UN system.** The ITU Academy platform has improved considerably in its design and functionality over the last two years, but improvement is still required for it to be at the leading edge of such provision. Specific recommendations towards this end, building especially on the comments made previously within this review, include:

- Substantial review and discussion with other cognate providers about the platform development, alongside discussions over possible joint or merged platforms with other UN agencies, with different implications for each.
- Detailed discussions specifically with UNDP about their ongoing work on platform development, and possibly future collaboration in the context of the UN SG's *Roadmap for Digital Cooperation*.
- Creation of a feedback facility that requests users to provide regular feedback on its design and functionality.

Short-term recommendation 9: The Centres of Excellence Network

171. **Immediate steps should be taken both to streamline and yet also to enhance the quality of delivery of the CoE network, so that users can be guaranteed excellence of provision in topics for which their organisations have a strong need.** The CoE network is variable in quality and in status, and although quite popular there are many areas in its delivery where improvements can be made. Agreements made with CoEs for the current four-year cycle should be honoured, but in the meanwhile it is important that lessons are learnt from the network that can be taken forward into the future structure of the ITU's overall provision. In the short term:

- The ITU, through its regional offices should seek to use all means to facilitate the enhanced performance and delivery (both quantitatively and qualitatively) of CoEs in their regions.
- Building on the material gathered for this review from CoE focal points and participants' feedback, ITU staff should explore a range of possible options for the future of the CoE programme in a next cycle should, for whatever reason, the longer-term recommendations of this report not be implemented.
- A new feedback form should immediately be introduced to provide more detailed and systematic information about learner needs, quality of provision, and course relevance for delivering their organisation's objectives.
- All participants should be invited to join the new alumni network, and should be asked for feedback at 6 months and 12 months after their course to understand more about the implementation of their learning outcomes.
- The marketing strategy for CoEs should be substantially enhanced.

Short-term recommendation 10: Crafting carefully designed and planned partnerships

172. **The ITU should create a carefully crafted and clearly articulated learning partnership framework through which it can engage positively in transparent dialogue with partners, so that it can better implement effective and unbiased capacity development and training activities with them and at the same time reduce the ITU's reputational risks.** This report has at various points noted the reputational risk for the ITU in its association with entities delivering capacity development and training on its behalf from providers who are seen by some as representing a particular sector or national interest. This is a complex and to some extent an intractable issue, but having a formal and transparent policy with respect to such partnerships can help to allay such concerns, whilst also delivering a better quality of service.

- BDT should develop a clear learning partnership framework drawing on existing ITU partnerships protocols for crafting partnerships.
- This should also draw on existing good practices and be in line with wider UN agreements such as those promoted by the UN Office for Partnerships[195].
- The framework should be clear and transparent about the anticipated benefits and contributions that should be expected by partners, the ITU and its members.
- The loose use of the word "partnership" in the context of capacity development and training to refer to a wide range of different practices should no longer be permitted unless it satisfies the working definitions within the established framework.

10.2 Longer-term recommendation

173. The potential for the ITU to create its own Institute is a compelling and potentially exciting option, as outlined in Section 9 above. However, the cost, the complexities of the required governance structures, and the challenge of maintaining a physical entity in a training world that is becoming ever more virtual, suggest that may not be the optimal choice for the ITU at the present time.[196] Instead the overall long-term recommendation of this report is that:

The ITU should create a substantial centralised entity (or Unit)[197] within its existing organisational structures to provide the service function of managing and delivering the ITU's capacity development and training activities.

What the Unit could look like: a summary overview

174. In essence, this Unit would perform many of the functions of the potential Institute as described above, but would be less autonomous, would not require new and complex governance structures, and would not be as expensive. Four underlying elements of the Unit need to be kept in mind when considering this recommendation:

- The Unit's purposes would be to provide services to all relevant Bureaux and Departments within the ITU and would support and work with them in a variety of ways to craft together the highest quality relevant learning resources and (where pertinent) delivery of training, primarily for members, but also for others.
- It would initially consist of a team of c. 15 people with expertise in all aspects of capacity development and training relating to the ITU's mandate (from conceptualisation and design, to implementation and delivery). Members of the team could be dispersed, but there are synergies in most of them being co-located.

[195] https://www.un.org/partnerships/.
[196] Were cost not to be an issue, and were the ITU to be willing to consider creating and supporting a largely independent entity, then the Institute model certainly has many appealing characteristics. Our discussions both within and outside the ITU nevertheless suggest that these challenges are unrealistic at the present time.
[197] The word "unit" is used, since it is more important for this recommendation to be accepted in principle, rather than getting bogged down in arguments as to whether it is a Department or Division within the ITU's framework.

- It would develop and maintain an alumni network to ensure appropriate measurement of learning outcomes, as well as the creation of a global peer network of trained individuals within organisations committed to using learning effectively for delivery of the ITU's mandate, who could also support and mentor each other.
- It would concentrate more on developing and delivering the ITU's own capacity development and training, rather than on facilitating other organisations to deliver such activities for the ITU's membership.

The importance of brand identity.

175. The ITU Academy has already established some measure of positive brand identity, although there remains a need for considerable enhancement of this identity. On balance, this report recommends that a relaunch of this brand would be more desirable than creating a new Institute brand, real or virtual. The UN JIU report (2020)[198] has also made strong comments about the need for greater uniformity in meaning around the use of the word Academy within the UN system, and current ITU usage of the term would seem to be broadly consonant with that of some other UN agencies (such as the FAO). Although other UN entities do use the term Virtual Institute (such as UNCTAD), in general usage an Institute is still mainly considered to be a physical entity, and therefore suggest that the term should only be used as such. Moreover, if there is no real difference between a virtual institute and a virtual academy, this report suggests that it is probably better to revitalise a known virtual brand (the ITU Academy) than create a new one.[199]

The Unit's core characteristics

176. Four closely inter-related elements that contrast with the ITU's existing work are integral to a more detailed understanding of the character of the proposed unit:

- **Building on the ITU's comparative advantage**. The ITU's home page declares that it "is the United Nations specialized agency for information and communication technologies – ICTs".[200] This, though, is very broad, and has been widely contested within the UN system and beyond. The UN SG's *Roadmap for Digital Cooperation*,[201] for example, makes it clear that ICTs are a UN-wide agenda, with the ITU being mentioned substantively in only three places in the June 2020 report, especially emphasising its potential role in capacity "building" (to use the UN SG's terminology).[202] This report has been commissioned by the ITU, and it therefore focuses specifically on precisely what it is that makes the ITU unique, and what its main competitive advantages are in capacity development and training. These include *inter alia*, its Sector membership of private sector companies, its work in ITU-R on spectrum allocation and satellite orbits, some of the work in ITU-T on standardisation,[203] and ITU-D's particularly close support for and work with member states in some of the economically poorer countries of the world on issues such as regulation, cybersecurity and broadband.[204]
- **Beginning by understanding the real needs of members**. Many of the ITU's existing capacity development activities tend to be supply led, and it is not always clear precisely how they deliver on the

[198] Dumitriu, P. (2020) Policies and platforms in support of learning: towards more coherence, coordination and convergence. Report of the Joint Inspection Unit, JIU/REP/2020/2, Geneva: UN.
[199] There is a wealth of literature on brand revitalisation. A couple of short introductions may be found by *The Investor's Book* at https://theinvestorsbook.com/brand-revitalization.html and by *The Business Journals* at https://www.bizjournals.com/bizjournals/how-to/marketing/2018/02/5-steps-to-brand-revitalization.html
[200] Although, as was pointed out to us several times in undertaking this review, the definition of ICTs is very broad, and this is not actually stated in its constitution.
[201] https://www.un.org/en/content/digital-cooperation-roadmap/.
[202] https://www.un.org/en/content/digital-cooperation-roadmap/assets/pdf/Roadmap_for_Digital_Cooperation_EN.pdf. The use of the word substantively means that mentions in endnote or as a source for a Figure or Table are excluded.
[203] Although this has not been uncontroversial in recent years. See, for example, https://www.ft.com/content/b34d8ff8-21b4-11ea-92da-f0c92e957a96.
[204] Noting, for example, the founding role that the ITU has played with UNESCO in creating the Broadband Commission https://broadbandcommission.org/Pages/default.aspx/

real needs and requirements of members. The ITU must have clear systematic means through which it can understand in depth the precise needs of the administrations of each member state, the best ways in which such capacity development can be delivered for and with them, what training they have already received, and how its development outcomes can be measured.

- **Understanding the complex market-place**. There are many providers of excellent capacity development and training in digital technologies and communications at all scales and levels across the world (Section 8). It is crucially important that the ITU does not waste its limited resources delivering activities that duplicate what already exists, that it can point members to these other opportunities for them to pursue, and that it can also identify gaps where its core strengths can give it a position of market leadership.
- **Doing a few things really well: quality is the priority**. The ITU only has limited resources, but the evidence adduced here, especially through its existing reporting mechanisms, suggests that quantity of delivery (inputs and outputs) is sometimes prioritised over the quality of outcomes. These final recommendations are about ensuring that the ITU is well positioned to deliver the highest quality of capacity development and training for its members within the available resource window.

Relationships with other UN agencies

177. This report has shown that most UN agencies have at least some ongoing capacity development activity concerning how digital technologies can contribute to their core mandates."[205] It is therefore essential that the ITU grasps this opportunity to work closely with relevant other UN agencies in helping them to deliver the optimal quality of training in the use of such technologies within their mandates. The new Unit should work especially closely with the UNDP on the design and implementation of development focused outcomes, with the UNDP's national and regional presence being an important vehicle for delivering shared activities.

What the Unit would deliver in practice

178. The Unit would work flexibly with colleagues in other parts of the ITU, as well as with members and partners to develop and deliver the highest possible quality of capacity development and training activities. This would include working with each sector in helping them develop and deliver their capacity development activities along the lines outlined above for an Institute (Section 8). Staffing requirements should also be broadly similar to those suggested for an Institute. Many of the outputs would be similar to those that could be delivered by an Institute (see paras 137-144) and so these are not repeated here.

179. **Most capacity development and training will be delivered online**. As with the recommendations for an Institute, it is likely that in the short term (at least in 2021) the approximate balance in delivery for the Unit would be:

- Online training courses (probably c.60-70%; including both tutor-led and self-paced)
- Face-to-face training (probably c.10-20%)
- Combination of online and face-to-face (10-20%)

Nevertheless, in many parts of the world digital connectivity is still insufficient for really high-quality interactive engagement in training, even in capital cities, and there are various circumstances in which face-to-face training remains necessary, not least in providing hands-on practical skills.[206]

180**. The highest possible quality of learning platform**. As a matter of urgency, the new team responsible for the Unit should review other existing learning platforms within the UN, building on the comparisons and suggestions made in this report (paras 85-90). It should also engage with existing initiatives that are exploring the possibility of the creation of a joint platform for groups of UN agencies. Whilst recognising the considerable

[205] For example, for FAO see https://elearning.fao.org/course/view.php?id=199; for ICAO see https://www.icao.int/about-icao/DrAliu/Pages/Capacity-Building-and-Human-Resources-Development-for-the-Next-Generation-of-Aviation-Professionals.aspx.
[206] Although advances in VR and AR are reducing this requirement for many areas of practical training.

advances recently made with the ITU Academy portal, and noting that users have very different preferences for and expectations of learning environments, this report nevertheless recommends that the ITU should consider the possibility of a further substantial redevelopment of this platform, or if necessary a complete rebuild for the new Unit – although probably still based on the Moodle Open Source platform.

181. **Marketing and gap analysis**. It would be essential for the team to maintain excellent knowledge and awareness of wider developments in online capacity development and training relating to the ITU's areas of specialism, not least so that it remains at the cutting edge of the field, but also so that it is readily able to identify gaps that it could fill at the interface between digital technologies and international development. The Unit would also have responsibility for the marketing and distribution of its learning processes and products.

182. **Liaison with partners and other providers**. As with a potential Institute (para 131), the team would carefully need to balance collaboration and competition with other entities, whilst protecting the ITU's own key competitive advantages. In some instances it would make sense to work closely with entities that have relevant expertise lacking within the ITU to deliver a service to members together, whereas in others it might be wise to suggest that members simply work directly with another entity because it would be more cost effective for them.

183. **Alumni management**. A fundamental aspect of the team's remit would be to develop and maintain a comprehensive alumni network, both to support the continued professional development of those who have participated in its training, but also to understand better the learning and development outcomes of such training. This would build on the short-term activities recommended above (see paras 168 and 174). Ideally, the alumni management platform would be integrated with the learning platform recommended above, but a careful review and assessment should be made of the optimal package for this.[207]

Staffing structure, location and advisory board

184. The **staffing structure** for the new Unit would be broadly similar to that required for the Institute model discussed in detail above, with some revisions to the proposed scales.[208] Evidence from other UN agencies suggests that such units work best when there is good internal digital expertise, even where most of the design and development are outsourced. All other staff roles are clearly and directly related to the processes identified above. It is estimated that the total salary costs to the ITU would be CHF 2,569,450. This level of funding is a minimum to be able to make the Unit work effectively, and the report anticipates that through the acquisition of additional funding, in part through some tendering and course delivery, revenues would increase so that the staff numbers within the Unit would grow. This could also be supplemented by a rigorous paid internship programme.[209]

Location

185. This report's recommendation is for most of the unit's staff to be **located physically at the ITU's headquarters in Geneva**, because of the synergies that remain with physical juxtaposition, and also the need to liaise closely with colleagues in other sectors on a regular basis.[210] However, this would not be essential for everyone, and options for a distributed pattern of staffing might also be considered in line with wider ITU staffing policy. A rotating arrangement with UNDP, whereby different UNDP members of staff and members of this Unit periodically rotate between New York and Geneva might also be an interesting option, helping to ensure closer synergies and understandings between the two agencies.

[207] See reviews of 119 alumni management software options at https://www.softwareadvice.com/uk/nonprofit/alumni-management-comparison/

[208] Directorate (Director D1, Executive Assistant G7); Quality Assurance (Head of QA P5, QA officer P2); Needs analysis and membership liaison (Head P3, Admin G6); Course design and delivery (Head P4, Senior Course designer/delivery P3, 2 Course designer/delivery P2); Partnerships (Partnerships and brokering officer P4); Alumni relations (Alumni support officer P2); Digital support (Senior programmer P3, Junior digital support P1); Marketing and external affairs (Marketing officer P3)

[209] This will vary in different parts of the world depending on local employment law.

[210] This is based on an assumption that COVID-19 restrictions on movement will not last beyond mid-2021, and that there will be a new-normal in place by the time these recommendations are implemented.

Governance and reporting mechanisms

186. The place of the Unit within the ITU's **organisational structure** is an important area for consideration, but would depend very much on the optimal internal arrangements that work best within the existing management structure and allocations of funding within the ITU. It is recommended that a group of external advisers, perhaps 6 in number (possibly one from each region), is specifically appointed to support the work of the unit, and that this reports to the Director of the Unit. This raises questions about the future of the current 12 person GCBI,[211] although one alternative would be to continue to use the GCBI as an advisory board to the new Unit. Another would be to have both an advisory group to work on more day to day activities, as well as the GCBI to provide more of an oversight function.

Other resourcing requirements

187. A fundamental difference between this recommendation and that for an Institute is the substantially reduced costs associated with not having to fund a building with its related facilities. Some of the digital technologies and support requirements would be lower, and they could be subsumed within the overall overheads of the new ITU Headquarters Building.[212] The requirement for specialist equipment and software for the unit, as well as hosting and maintaining the portal would nevertheless still be needed within the budget,.

A combination of business models

188. Paras 149-156 on the options for an Institute highlighted seven main types of business models that it might use, based on existing exemplars and good practices in other UN agencies and companies. Many of these remain relevant for the creation of this recommended unit, but for it to be successful the ITU would need to make a strong commitment to providing substantially more core funding to capacity development and training. In practice, the emphasis on different funding streams is likely to change as the Unit evolves not least in response to member needs and lessons learnt regarding how resources can be maximised.

189. The Unit should have a clear and transparent method to identify costs of each training activity (especially staff time), so that decisions can be made as to the relevant source of funding (budget line) against which this will be counted. This would require clear allocation of time available by staff within the Unit for each activity undertaken, and a novel internal financial accounting system within the unit. Nevertheless, this would only be internal within the unit, and has no wider implications at this stage for the budget and accounting systems within the ITU.[213]

190. It is also important that there is sufficient financial flexibility and creativity for the Unit to be able to benefit from tendering for external contracts and income generation opportunities through which it can employ additional staff.

191. The Unit should adopt the principle that all capacity development and training activities are fully costed and resourced, but once the cost of such course or training content development has been covered, then all resultant resources are made freely available as OER for future users.

10.3 Timeline

192. Four basic stages in the implementation of these recommendations are proposed:

- Stage 1: 2021 Commitment to implementation
- Stage 2: Short-term recommendations to be delivered 2021-2022

[211] Which would require a change to Resolution 40 of WTDC-10, and maintained by WTDC-14. Terms of Reference at https://academy.itu.int/sites/default/files/media/file/GCBI_TOR_Final.pdf.
[212] https://www.itu.int/en/hq-building/Pages/default.aspx
[213] We are aware of at least one other UN entity that manages its training budget in this way.

- Stage 3: Creation of the new Unit for capacity development and training[214]
- Stage 4: Mid-2023 Full launch

10.4 Legacy activities

193. Four areas of activity do not sit easily within either the models of a new Institute or a new Unit, each for a range of different reasons:

- **The Digital Training Centres (DTCs**) (para 30). Both models of an Institute and a Unit recommend that the ITU should concentrate on delivering higher levels of *institutional* and *organisational* capacity development rather than facilitating or delivering basic level practical solutions on the ground specifically intended for the mass of the population.[215] The training that an Institute or Unit could provide to interested governments (in collaboration with other UN agencies such as the UN and ILO, as well as other partners) would be intended to enable the governments themselves to roll out effective digital skills training of their own across their lifelong learning systems. This would have a good chance of going to scale, and in the long run in empowering higher numbers of people than the local centres being brought together through the DTC network initiative. Moreover, it is essential that any such initiatives should work effectively with a wide range of local and international partners, and rather than tying them in to a small number of ITU preferred partners, it would be preferable for the ITU to run training for governments in how to craft their own digital partnerships with the private sector, civil society and other international agencies. There is nevertheless no reason why the DTCs could not continue to be facilitated as a separate initiative through the BDT.
- **The Centres of Excellence Network**. The CoEs are something of a misnomer, and although some of them have delivered valuable and excellent training opportunities for individuals in the past, they are of variable quality, and the business model on which they are based is also a cause for concern (paras 29 and 172). There is little evidence available that the CoEs have contributed significantly to enhanced development outcomes, although they have certainly enabled individual participants to gain certificates of achievement that they value. If such training is still required by member states, then the period until the end of the current CoE agreements in 2022 should be used by the staff of the new Unit to create a new brokerage and/or partnership model through which the ITU can more effectively facilitate access to the best of the plethora of high quality training opportunities that are available globally. It is intended that the Unit's own new provision of high-quality training would, however, deliver much of the most important capacity development and training required by member states.
- **The Capacity and Skills Development Division (CSD)**. It is recommended that the new central Unit would replace the CSD, although not necessarily being situated within the BDT. Situating the Unit centrally within the ITU would facilitate interactions with all Bureaux and entities across the organisation as a whole. Existing staff in CSD who wished to move to the new Unit could readily be accommodated within it.
- **The Training Programmes (SMTP, QoSTP, IoTTP and ICTCCTP) and the eMCM Master's Programme**. Whatever longer term recommendation is adopted, the team responsible will need to concentrate on doing a few things really well. Based on the evidence to date, these ITU programmes have attracted a relatively small number of individuals, and have not yet yielded their anticipated expectations. Moreover, there are many other higher level courses and Master's programmes that suitably qualified and interested people could apply to join. If there is strong demand from members, an Institute or Unit could identify the best existing programmes, and through its brokerage function seek to arrange reduced costs for these to members. It could additionally seek to develop partnerships with a small number of the highest quality existing providers, contributing if invited to the development of their programmes, or indeed developing joint programmes.

[214] Were Council to prefer the Institute model, and be willing to provide the funding for it forthwith, then comments in Stage 3 would also apply to any new Institute.
[215] It can also be noted that only 9 DTC's were identified in the first stage of the model, https://academy.itu.int/main-activities/digital-transformation-centres-initiative.

Should the ITU wish to retain any of these, they could readily be continued within the remit of BDT, but administered entirely separately from the Institute or Unit.

Section 11: Conclusions

194. This report is based on the insight and input from more than 500 people, around 8% of whom currently work within the ITU. While there is much respect for the ITU among its members, and satisfaction with the adequacy of its current capacity development and training provision, it is an appropriate time for a radical change in approach if the ITU and its members wish to become an established and world-leading provider of such activities in the field of digital technologies and telecommunications in the future. The ITU is well-positioned to become a leader among UN agencies in the field, especially through its Sector and Academia membership structures. However, it needs renewed ambition and focus in order to achieve this. Becoming extraordinary will require vision to support the needs of the administrations in its member states, ambition to be the best at what it can achieve, and commitment to provide the necessary funding to deliver high quality resources and activities. The ITU must build strategically on its unique competitive advantages, and seek to be the very best at what it aims to do. This will involve doing a few things really well, rather than scattering its talent and expertise too thinly

195. The report's main long-term recommendation is that the ITU should create a strong centralised Unit to deliver high-quality capacity development and training across all of its Sectors. This is a preferred option to a quasi-independent Institute, and would deliver much of the same functionality.

196. The choice, though, depends on what the ITU's membership wants. If the resources needed are available, and there is the will to create a quasi-independent Institute, that would be a feasible and compelling alternative option. For this to be successful, though, would require very substantial funding, effective leadership, strong governance structures, and comprehensive support from the membership. On balance, this report concludes that establishing a centralised new Unit is a stronger, lower risk, and more sustainable recommendation than creating a new Institute.

197. At the very least, it is necessary for the ITU to embark on the ten short-term recommendations contained in this report as soon as possible, so that it does not lose ground to competitors both within the UN system and beyond. If it does not take decisive action now, then its role as a leading provider of capacity development and training in its mandate areas will be jeopardised. These short-term recommendations are straightforward, achievable, and should be implemented regardless of the ITU's longer-term preferences.

198. More broadly the report has five wider implications for the ITU to consider:

- **The balance between institutional, organisational and individual capacity development and training**. This issue is of wider relevance to other UN agencies as well as the ITU, but a decision needs to be made in a context of limited resources whether the ITU wishes to deliver capacity development at all of these three levels. The report recommends focusing mainly on the first two, because by so doing it will enable governments and regulators themselves better to deliver the benefits of ICTs and telecommunications to all of the people living within their states' boundaries, and the ITU's support will thus have much more extensive reach than if it concentrated primarily on supporting a more limited number of individuals.
- **Balancing design and delivery of its own capacity development and training in contrast to facilitating others to deliver it for members.** Underlying this entire report has been evidence suggesting that the new structures to be put in place should focus primarily on enabling the ITU to design and deliver its own high quality capacity development and training resources, rather than merely facilitating access for members to the training provided by others. Brokerage and partnership arrangements could continue to support the latter should this be required by members, but the

report recommends that the ITU should focus especially in the areas where it has a clear competitive advantage.

- **Prioritising capacity development and training in the ITU's 2020-2023 plan and subsequently**. Capacity development and training are not featured prominently in the ITU's current plan. Members and Council need to agree on the precise level of emphasis that they wish to place on these, and this report suggests that now would be an ideal time to prioritise them much more highly so that the ITU can become increasingly established as a leading UN agency in the provision of digital learning for development.
- **Budgeting and reporting mechanisms**. The report recommends that new budgeting arrangements are put in place swiftly so that there can be full and transparent reporting of the costs and income from all aspects of capacity development and training activities within the ITU, and thereby to help ensure quality of provision.
- **A commitment to excellence**. This is also an opportunity for the ITU to recommit itself to excellence in delivery. This requires an acceptance and willingness to let go of legacy projects and initiatives as priorities and agendas change, even when these changes are the result of externalities such as COVID-19. Activities within each Sector may therefore need to be reconsidered in the light of the principle of being the best at doing fewer things, rather than being adequate at doing many.

Annexes

Annex 1: Terms of Reference for Contract Reference CTR-S-BDT-2020-007

Background

One of ITU's core mandates is to strengthen capacity in the field of digital technology development, as articulated through WTDC and Plenipotentiary Conference Resolutions. This is done through a number of programmes and projects, including the ITU Academy e-learning platform, the Centers of Excellence network, regional and national capacity development workshops as well as a series of other training activities carried out in collaboration with partners from the private sector, academia and other training providers. Capacity development activities cover all areas of ITU's work, ranging from spectrum management, wireless and fixed communication, IoT and digital broadcasting, to cybersecurity, digital economy and innovation, digital inclusion and Internet-related policy issues. Capacity development activities are primarily targeted to the ITU membership, including government officials, regulatory authorities, telecom and ICT companies, as well as other professionals in the field of digital technologies and the broader community.

More information on ITU's work on capacity development is available on the ITU websites:

https://www.itu.int/en/Pages/default.aspx

https://www.itu.int/en/ITU-D/Pages/Regional-Presence.aspx

https://www.itu.int/en/events/Pages/Upcoming-Workshops-and-Seminars.aspx

https://academy.itu.int/

Mandate

The consultant will undertake an in-depth analysis and review of current training and capacity-building activities and will assess the needs for the establishment of a training institute in ITU (the "Study").

More specifically, the study should cover the following elements:

A. Context and background

The consultant will review the global landscape of capacity building and training activities/programmes in the field of digital technologies, including those offered through the UN system (e.g. the UN Technology Bank) and relevant private sector organizations and other main actors, the learning tools and platforms used as well as the methodologies applied, and place ITU's approach to training and capacity development within the global context. This will include a review of existing business models for training provision used by international organizations and private training providers (e.g. free, paid, virtual, etc.).

B. Stocktaking of existing capacity development activities provided by ITU

The consultant will take stock of the existing capacity development activities provided by ITU (including all three bureaux and the General Secretariat, as well as Study Groups) and its partners, including those delivered under the framework of the ITU Academy, and through partnerships with the Centers of Excellence network and other training providers. The stocktaking will cover both qualitative and quantitative aspects of the activities and should include:

- Types of workshops and courses, target audiences, language used and financial models.

- A quality assessment of the workshop and training methodologies and delivery methods.
- An assessment of the effectiveness and efficiency of the capacity development activities delivered.
- Inventory of ITU training materials as well as a qualitative assessment of such materials.
- An assessment of the financial and human resources allocated by ITU.

C. Existing gaps and areas of improvement

Based on (1) and (2) above, the consultant will identify gaps and areas of improvement for training delivery, including topics covered, target audiences addressed and delivery methodologies. The assessment will take into consideration what is already on the market provided by other training institutions and similar entities set up by the UN system or other actors and identify ITU's core competitive advantages and niche markets. It will also explore whether ITU is "fit for purpose" in the field of skills development and training delivery.

D. Assessing demand for a new training institute

Based on (1) to (3) above, the consultant will assess the needs for establishing a new ITU training institute (physical and/or virtual). This will include a discussion on the main objectives, impact areas, functions, delivery methods and target groups of such an institute. The consultant will further elaborate on how such a new training institute could impact or be linked with the existing capacity development activities delivered by ITU, including those provided under the ITU Academy platform, with a view to avoid duplication and pool resources.

E. Resource requirements and governance structure for the new training institute

The consultant will develop a detailed proposal describing the human and financial resources required to setting up, running, and maintaining an ITU training institute, based on a sustainable business model. The consultant will also develop a detailed governance structure for such an institute, including the role of ITU and other stakeholders.

F. Alternative options to improve ITU's work on capacity development

In addition to the submission of a proposal for a new training institute (see 4 and 5 above), the consultant will be required to present alternative options to strengthen ITU's work on capacity development, taking into account existing training programmes, platforms and activities. Such options could include building partnerships with existing training institutes (UN, academic, private), improving current delivery programmes, introducing new training and learning strategies, among others. Any alternative options/models should include human and financial resource requirements.

G. Recommendations

Based on the above, the consultant will make recommendations on the way forward. Recommendations need to take into account the results-based management approach applied by ITU and should be innovative (i.e. add to (or differ from) the previous work undertaken by ITU in this field).

Annex 2: How the report structure and methods deliver on the ToR

Relevant element of ToR	Relevant section of the report	Pages within the report	Literature and online resources	ITU doc's and website	Surveys	Discussion groups	Interviews

Context and background, and review of global landscape (A)	Sections 1, 2, 3 and 8	10 pages	
Stocktaking of existing capacity development of activities provided by the ITU (B)	Sections 4 and 6	10 pages	
Existing gaps and areas of improvement (C)	Sections 5 and 7 (and 8)	5 pages	
Assessing demand for a new training institute (D)	Section 9	25 pages	
Options to improve ITU's work on capacity development	Section 9	As above	
Resource requirements and governance structure for a new training institute	Section 9	As above	
Recommendations	Sections 10 and 11	11 pages	
Annexes	Shared	10 pages	

Annex 3: A framework for considering the ITU's capacity development and training[216]

Nomenclature	BDT (ITU-D)	TSB (ITU-T)	BR (ITU-R)	GS (and ITU wide)
Formal (where there is an explicit mention and intention of some capacity development or training provision)				
Training courses (or courses) (face-to-face, blended, or online) (instructor-led or self-paced)	Online through the Academy Platform Through CoEs Through academic partner Through partner institutions Classroom, online and self-studies	Online (A.1 course) NGN course [217]		
Seminars/ Webinars	Seminars	Webinars	Seminars (WRS, RRS) (now more webinars) (and more being done at regional level)	
Training Programmes	SMTP QoSTP IoTPP ICT&CCTP	(see under SG meetings)	SMTP (with BDT)	
Master's Programmes	eMCM			
Practicals (hands on training)	Practicals	Practicals (hands on training)	Practicals (delivered in workshops)	

[216] Note that dark grey shading indicates explicit mention on the ITU Academy platform at the commencement of the review.
[217] The NGN course was available on the Academy platform for one year only, and has now been removed.

		BSG[218]		
Workshops	Face-to-face workshops (see also regional and Study Group)	Workshops (back to back with SG, Regional SG and Focus Group meetings)	Regional Workshops Inter-sectoral Workshops Inter-Regional Workshops	
Clinics		Clinics FIGI Security		
Regional training (often tailor made in response to member requests)	Regional training activities	Regional training activities (providing content and experts)	Regional training activities	
Specific thematic training (sometimes tailor made in response to member requests)	Thematic priority area specific training			Training for SME's through Telecom World
Study-Group meetings	With workshops	Workshops back to back with SG meetings		
Conferences and Symposia[219]		Kaleidoscope conference AI for Good FIGI Symposium Future Network Car Conference U4SSC	Symposia (often in conjunction with SG meetings)	
Meetings and events	Meetings and events			
Mentoring		Mentoring through SGs	Mentoring (such as Network of Women; also for SG and Conference Chairs/Vice-Chairs)	Training for SME's through Telecom World
Quizzes		BSG Quiz220		
Distinct programmes	ITCs[221] DTC			
Informal *(where there is no explicit mention or deliberate intention of capacity development or training provision by the ITU, and usually no direct funding available from the ITU for participation, but where participants do gain valuable knowledge and experience)*				
ITU publications	Publications	Publications	Publications	Publications
Participation in SG meetings	Participation in SG meetings	Participation in SG meetings	Participation in SG meetings	
Participation in conferences and symposia	WTDC	WTSA	WRC222	WSIS WCIT Plenipotentiary

[218] BSG – Bridging the Standardisation Gap; face-to-face training done during the SG meetings, with participants being expected to have done the online A.1 course before participating.
[219] These conferences and symposia could also be included under "informal", but TSB considers them to be formal because an ITU Circular or other formal means of invitation are issued for these events, and they form part of a specific action item under the TSB action plan.
[220] Although mentioned at https://www.itu.int/en/ITU-T/gap/Pages/quiz.aspx, TSB does not consider this to be a quiz, but rather some exercises for how to present contributions and how to participate in SG meetings.
[221] Indicates elements that BDT considers no longer to be being delivered as part of their Capacity Development and Training programme.
[222] BR feel strongly that WRC is not even informal capacity development; the view of the review team is that by attending WRC people do gain experience and understanding of how it works, and therefor that it is indeed informal learning. People are usually much better able to contribute the second time that they attend the WRC.

				Telecom World (and Forum)
Regional and policy awareness workshops				
Meetings	Global ICT Capacity Building Symposium; ITU-Academia Partnership Meeting			
Public lectures		Lectures		
Seminars/Webinars		Webinars		

Annex 4: Main areas of overlap of CDT thematic areas and capacity development and training provided by other UN agencies

This Table provides an indication of the extent of capacity development and training provided by other UN agencies with respect to digital technologies and telecommunications. Specific figures indicate the numbers of courses and activities listed as results from searches on the agencies' platforms relating to capacity development and training (where they have such platforms); ✓ indicates mentions relating to some other form of capacity development in these areas in their documentation and on their websites.[223] Its purpose is to show that many other UN agencies provide capacity development and training in BDT's current thematic priorities, and although it can only be an approximation it is likely to represent an underestimate of the extent of these activities.

	Cybersecurity	Digital Inclusion	Digital innovation ecosystem	Digital services and applications	Emergency telecommunications	Environment	Network and digital infrastructure	Policy and regulation	Statistics
WSIS Action Line Facilitators[224]									
FAO (Academy)[225]		3	1	9		>10	5	P	
ILO (ITC-ILO)[226]			1	3	P				
ITC[227]		P		P			P	P	
UNCTAD[228]		P	P	P		P		P	
UNDESA[229]		P						P	P

[223] Such figures are indeed only approximations, and in some cases a course may not cover much of direct relevance, whereas in others additional courses or other forms of capacity development may well be undertaken by an agency on a relevant subject even though there is no mention in an agency's documentation. Searched for courses, where these exist, have not just searched for the single word, such as "Policy" but have instead searched for "Digital Policy" or "ICT Regulation".

[224] By definition as WSIS Action Line Facilitators, and as UN Agencies all involved in some kind of capacity development and training, there is some intersection with the work of the ITU in most, if not all, of these areas.

[225] https://elearning.fao.org. Figures for courses. In addition there are numerous webinars on various aspects.

[226] https://www.itcilo.org/

[227] Note, ITC is a facilitator but is not itself a UN specialised agency, and is instead a multilateral agency with a joint mandate with WTO and UNCTAD. See also https://www.intracen.org/digital-transformation-for-good/.

[228] UNCTAD Virtual Institute https://vi.unctad.org/

[229] https://www.un.org/development/desa/capacity-development/about/; for its capacity development PMO see https://www.un.org/development/desa/capacity-development/about/capacity-development-office/ and https://www.un.org/development/desa/capacity-development/capacity-development-tools/ for capacity development tools

UNDP[230]			P	P				P	P
UNESCO[231]	P	P	P	P				P	P
UNEP[232]		P		P		P			
UPU[233]				P				P	P
WMO[234]		P	P			P			
Other UN agencies and groups[235]									
IAEA[236]	P								
ICAO[237]	P			P				P	
IFAD[238]		P		P		P			
IMF[239]		19	3	8			7	26[240]	30
IMO[241]	P			P			P	P	
UNESCAP[242]				P	P			P	
UN-SG								P	
UNHCR[243]	P	P	P					P	
UNICEF[244]		33	18	53			13		
UNIN[245]		P	P						
UNITAR (courses)[246]	11	86	59		21	203		172	41
UNODC[247]	P			P					

[230] UNDP claims to be "the thought leader of digital development", https://digitalstrategy.undp.org/strategy.html and thus covers many areas of capacity development relating to digital technologies. See also examples such a https://www.undp-capacitydevelopment-health.org/en/capacities/focus/innovation-and-technologies/, and UNDP (2009) *Capacity Development: a UNDP Primer*, New York: UNDP.

[231] Much of UNESCO's capacity development relating to the use of digital technology is delivered through its institutes (see for example UIS http://uis.unesco.org/en/topic/capacity-development,) and the world of its Communication and Information Division, as well as its ICT in Education Office in Bangkok.

[232] See https://wesr.unep.org/, https://wedocs.unep.org/bitstream/handle/20.500.11822/34917/AN2020.pdf?sequence=3&isAllowed=y (which lays out how UNEP is embracing digital transformation) and https://www.unenvironment.org/resources/report/capacity-building-sustainable-development-overview-unep-environmental-capacity

[233] http://upu-trainpost.com/eng/trainpost_index.htm and http://upu-trainpost.com/eng/calendar.htm

[234] https://public.wmo.int/en/our-mandate/what-we-do/capacity-development

[235] This is not a complete list of UN agencies and groups, but focuses on those where there was evidence of at least some capacity development and training in these fields

[236] https://www.iaea.org/publications/11166/building-capacity-for-nuclear-security

[237] https://www.icao.int/about-icao/DrAliu/Pages/Capacity-Building-and-Human-Resources-Development-for-the-Next-Generation-of-Aviation-Professionals.aspx

[238] https://www.ifad.org/documents/38714170/39144386/A+field+practitioner%27s+guide+-+Institutional+and+organizational+analysis+and+capacity+strengthening.pdf/48466eeb-244e-4f3b-a67d-f587ebf75038

[239] https://www.imf.org/en/Capacity-Development/training/icdtc

[240] A search for "digital policy" gives 105 matches; the figure of 26 is for "digital regulation"

[241] https://www.imo.org/en

[242] See for example https://www.unescap.org/sites/default/files/Mr.%20Bokyun%20Shim%2C%20United%20Nations%20Project%20Office%20on%20Governance.pdf

[243] For policy at a regional/national level see https://www.unhcr.org/ceu/118-enwhat-we-dohow-unhcr-operatespartnerships-and-capacity-building-html.html and https://www.unhcr.org/id/en/government-relations-and-capacity-building. UNHCR have produced very many training manuals especially on protecting refugees. See also https://www.unhcr.org/uk/publications/manuals/5c9b811b7/mainstreaming-capacity-development-overview-2018-sexual-gender-based-violence.html?query=Training.

[244] For the capacity building work of UNICEF's Office of Research-Innocenti, see https://www.unicef-irc.org/article/1810-capacity-building.html. For UNICEFG's global hub for learning see https://agora.unicef.org/.

[245] https://www.uninnovation.network/.

[246] Course catalogue at https://www.unitar.org/event/full-catalog/training-and-capacity-building

[247] See for example https://www.unodc.org/elearning/index.html; for specific subject matter training see examples as at https://www.unodc.org/ji/en/elearning.html, https://www.unodc.org/ji/en/selfdirected.html, and https://www.unodc.org/ji/en/trainersmanual.html.

UNPAN[248]		P		P				P	
UN Technology Bank[249]				P					
UNU[250]		P		P				P	
UN Women[251]		P		P					
UNWTO				P					
WIPO[252]			P					P	
World Bank Group[253]	4	27	58	47		23	15	28	3
	Cybersecurity	**Digital Inclusion**	**Digital innovation ecosystem**	**Digital services and applications**	**Emergency telecommunications**	**Environment**	**Network and digital infrastructure**	**Policy and regulation**	**Statistics**

Annex 5: Regional distribution of experts used in the BDT/Academy's Training Programmes

Region[254]	SMTP	QoSTP	IoTTP	CCTP	Total
Africa			3		3
Americas	8	3	3	5	19
Arab					
Asia and Pacific	2		2	1	5
CIS	1				1
Europe	10	11	8	7	36

[248] https://unpan.un.org/capacity-development and for its online training centre see https://unpan.un.org/capacity-development/OTC.

[249] The ToR for this report indicated that it should specifically review the work of the UN Technology Bank. This was established in 2018 to help least developed countries build science, technology and innovation capacities, ecosystems and regulatory frameworks, and one of its activities is intended to be to work with partners in these countries to ensure they have the capacity to adapt and use technologies to which they have access. It has not yet provided evidence of much substantive activity in capacity development and training, and is seen by some as being yet another UN initiative that has been created to serve particular interest groups, but that overlaps with work already being done by other UN agencies. It has announced, for example, that between June and October 2020 it was intending to deliver online training activities (MOOCs) with the well-established FAO brand for 47 countries to enhance access to recent scientific knowledge, and thus give them the opportunity to participate fully in the global scientific community (https://www.un.org/technologybank/content/online-training-courses). At the time of writing this report, it does not yet appear to have reported on their success or otherwise.

[250] Note that UNU has two entities with a strong mandate in capacity development and training in the area of digital technologies: the UN Institute in Macau, and UNU-eGov.

[251] https://trainingcentre.unwomen.org/portal/. This has been developed in collaboration with ITC-ILO.

[252] For a general overview of WIPO's work on capacity development, see: https://www.wipo.int/cooperation/en/capacity_building/; for its training Academy see https://www.wipo.int/academy/en/.

[253] The figures cited here are the number of search results for each theme on The Bank's Open Learning Campus (including the WBa Academy) which also provides many additional capacity development and training opportunities – see https://olc.worldbank.org/. The World Bank Group has for a long time provided diverse capacity development activities (see for example https://web.worldbank.org/archive/website00001/WEB/1ABOUT.HTM and https://openknowledge.worldbank.org/handle/10986/6312). The World Bank also provides many capacity development activities beyond those listed in its OLC. On statistics, for example, see https://www.worldbank.org/en/data/statistical-capacity-building.

[254] Source: documents made available by BDT, entitled "Experts for…." each of the four programmes.

Total	**21**	**14**	**16**	**13**	**64**

Annex 6: Characteristics of financial models for CD&T in ICTs and telecommunications

	Motives	Income	Expenditure	Risks	Benefits	Examples
Commercial (core business)	Profit	Clients paying full cost and profit	Staffing, materials, delivery	Insufficient market to cover costs	Flexible, financially aware	Universities, training companies
Commercial (corporate social responsibility)	Brand identity and reach	From sales profit of core business	Staffing, materials, delivery	Loss making financially	Raises positive profile of company	Cisco, Huawei
Partnership (fully shared)	Profit; branding; networking	Clients paying full cost and profit	Staffing, materials, delivery	Insufficient market, but shared costs	Shared risk, combining expertise	
Brokerage	Maximising reach with minimal input	A share of total income	Networking	Low, but must manage quality of service of those delivering	Less financial involvement, small team, little in-house expertise	
Membership service	Providing a service to members, brand identity	Membership fees (usually only works if few members take full benefit)	Staffing, materials, delivery	Inappropriate content and delivery, insufficient resources to provide free	Network building, serving members' wishes	Professional organisations, international organisations
Global common goods	Providing free resources, brand image	Foundations, donors	Mainly OER	Quality control; updating; funding renewal; delivery	Free to end user	Civil society organisations,

Annex 7: Scenarios for improving ITU's capacity development and training activities

Six different 'scenarios' for the future of the ITU's capacity development and training were developed based on the evidence gathered for this review. All of them are logical outcomes from the evidence and comparisons with other providers, both within and outside the UN system. These were presented to the ITU team responsible for this review, so as to learn what they thought about the strengths and weaknesses of each. The intention was to promote conversation and enable relevant ITU staff to contribute further insights into the review and thereby contribute to the report's final recommendations. Fourteen people kindly participated in the 'scenario review session' which was facilitated online using a Jamboard.[255]. A summary of each of the six scenarios is provided below.

[255] https://support.google.com/jamboard/answer/7424836?hl=en

- Scenario 1: **Capacity development and training explicitly for governments to work with and within the ITU**. This scenario focuses on ensuring that all members are able to work efficiently and effectively with the ITU on capacity development and training and has an emphasis on institutional and organisational capacity development and training.
- Scenario 2: **Improved delivery of existing modalities**. This scenario is based on improving what the ITU currently provides in capacity development and training, recognising that this is broadly appreciated and valued by the members. It seeks to improve the current approach without making major structural or strategic changes.
- Scenario 3: **Brokerage models** (variants include pure brokerage and partnerships). There are many alternative providers of high quality capacity development and training that sit alongside the ITU and have offerings that are somewhat similar. Indeed, much of the ITU's current offering is actually provided by these other entities. Therefore there is limited purpose in the ITU allocating significant resources to do everything new itself. Networks and reputation of ITU can be used to identify the highest quality and most relevant providers and deliver through brokerage and partnership arrangements.
- Scenario 4: **Centralised LD and CD&T unit**. This is based on a future where the ITU is a high-quality specialist deliverer of capacity development and training - as a learning organisation that delivers high quality and relevant learning resources. It requires creating a central unit that combines internal (L&D) and external (CD&T) delivery - potentially to be located within the General Secretariat.
- Scenario 5: **Institute with various possible models** (virtual, physical, blended). This is based on establishing an Institute for capacity development and training as a distinct entity for the ITU. There are several forms that an Institute could take, and each would require significant allocation of funds, both upfront and on-going costs.
- Scenario 6: **Provision of global resources for individual lifelong digital citizenship**. This is based on a future where the ITU takes on a much broader role in the provision of capacity development and training, and provides resources and training for a global audience both at the level of individuals and of organisations.

Annex 8: Activities for sharing of knowledge and know-how on radiocommunications

Indicator	2015	2016	2017	2018
Number of ITU-R free online publication downloads (millions)	0.9	1.0	1.7	1.57
Number of capacity-building events organized/supported by BR (presence and virtual)	25	38	37	34
Number of participants on capacity building events organised/supported by ITU/BR (cumulated during the period between two WRCs)	1518	737	1363	669
Number of technical assistances/events with BR participation	93	100	111	110
Number of countries receiving BR technical assistance/events	78	61	62	74

Number of participants/events in ITU-R conferences, assemblies and Study-Group related meetings (presence and virtual):	8972/38	6042/48	7061/52	4560/47
Number of countries participating in ITU-R seminars and workshops, SG and WP meetings and events (presence & virtual):	161	130	78	137

Annex 9: Overview of formal interviews undertaken as part of this review

A total of 65 formal interviews (n=26 female; n=39 male) were conducted for this review, many of whom had been specifically recommended to the review team. All those interviewed were guaranteed that their identities would be kept confidential to the Jigsaw team. Because of confidentiality concerns, the interviews were not recorded, but detailed notes were taken, and these were stored in password-protected encrypted files on separate hard drives unconnected to the Internet. All interviews were of at least one hour duration, and some people were interviewed several times. A small number of people preferred to provide written responses to the questions. The Table below provides an overview of the structure of the interviews..

Type of organisation	Organisations/Sectors represented[256]
ITU	BDT
	BR
	GS
	TSB
	Regional Offices
	GCBI
UN agencies (and Institutes)	FAO UNICEF UNU (and Institutes) UNITAR UNSSC ITCILO UNDP UNESCO (and its Institutes),
International organisations/ Foundations	ARIN CTO CTU Diplo ICANN ITSO

[256] Includes both present and recently past staff; a very small number are no longer employed in the stated organisations because of recent staffing changes.

Private Sector and Training organisations[257]	GSMA UKTA USTTI
Academic and research organisations (Including CoEs)	Several from Africa, Latin America and the Caribbean,
Consultants	Several
National representation and coverage (not including ITU, UN and international organisation staff who added considerable further diversity and country level information based on their previous careers)	Canada China Ghana, Kenya Poland Saudi Arabia Trinidad and Tobago UAE UK

A small number of those interviewed also participated in the three discussion groups that were convened as part of the review. Moreover, members of the review team also undertook participatory observation in training and workshops provided by some of the above organisations.

[257] Including technology companies, not-for-profit entities, and organisations (including member organisations) providing capacity development and training