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| Director of TSB |
| Report of the Telecommunication Standardization Advisory Group to the World Telecommunication Standardization Assembly (WTSA-24), Part I: GENERAL |
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| **Abstract:** | Pursuant to CV197H, CV197I, CV204, and Resolution 1 (Rev. Geneva, 2022) clauses 1.11.1, 4.4, 4.9, the Director of TSB is submitting herewith the report of the Telecommunication Standardization Advisory Group (TSAG) of the Telecommunication Standardization Sector (ITU-T) to WTSA-24 for its consideration and appropriate action. |
| **Contact:** | Mr Abdurahman M. AL HASSANSaudi Arabia (Kingdom of)TSAG Chair | Tel: +996 11 461 8015E-mail: tsagchair@nca.gov.sa |

Note by the TSB:

The report of Telecommunication Standardization Advisory Group to the WTSA-24 is presented in the following documents:

Part I: **Document 24** – General

Part II: **Document 25** – Draft revised Resolutions

Part III: **Document 26** – Draft revised Recommendations of the ITU-T A-series

Part IV: **Document 27** – TSAG report in respect of WTSA Resolution 22

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# 1 Introduction

Pursuant to CV197H, CV197I, CV204, and Resolution 1 (Rev. Geneva 2022) clauses 1.11.1, 4.4, 4.9, the Director of TSB is submitting herewith the report of the Telecommunication Standardization Advisory Group (TSAG) of the Telecommunication Standardization Sector (ITU- T) to WTSA-20 for its consideration and appropriate action.

## 1.1 Responsibilities of Study Group TSAG

The responsibilities of the Telecommunication Standardization Advisory Group (TSAG) are set forth in Article 14A of the ITU Convention, WTSA Resolutions 1, 22, 40, 45, and other relevant Resolutions.

## 1.2 Management team and meetings held by TSAG

TSAG met four times in Plenary in the course of the study period (see Table 1) chaired by Mr Abdurahman M. AL HASSAN, Saudi Arabia (Kingdom of), assisted by Vice-chairs Mr Samuel AGYEKUM (Ghana, from 01/2024), Mr Khalid AL-HMOUD (Hashemite Kingdom of Jordan), Mr Ulugbek AZIMOV (Republic of Uzbekistan), Mr Isaac BOATENG (Ghana, from 03/2022 to 01/2024), Mr Olivier DUBUISSON (France), Mr Mihail ION (Romania, from 01/2024), Mr Tobias KAUFMANN (Federal Republic of Germany, from 03/2022 to 01/2024), Mr Guy-Michel KOUAKOU (Republic of Côte d'Ivoire), Ms Fang LI (P.R. China, from 03/2022 to 07/2024), Ms Gaëlle MARTIN-COCHER (InterDigital Canada), Mr Victor Manuel MARTINEZ VANEGAS (Mexico), Ms Miho NAGANUMA (NEC Corporation, Japan) and Tong WU (China Telecom, P.R. China, from 07/2024).

In addition many Rapporteurs' meetings took place during the study period as e-meetings, see Table 2.

TABLE 1
Meetings of TSAG

| Meetings | Place, date | Reports |
| --- | --- | --- |
| TSAG | Geneva, 12-16 December 2022 | TSAG-[R1](https://itu.int/md/meetingdoc.asp?lang=en&parent=T22-TSAG-R-0001) |
| TSAG | Geneva, 30 May – 2 June 2023 | TSAG-[R2](https://itu.int/md/meetingdoc.asp?lang=en&parent=T22-TSAG-R-0002)-[R3](https://itu.int/md/meetingdoc.asp?lang=en&parent=T22-TSAG-R-0003) |
| TSAG | Geneva, 22-26 January 2024 | TSAG-[R4](https://itu.int/md/meetingdoc.asp?lang=en&parent=T22-TSAG-R-0004)-[R7](https://itu.int/md/meetingdoc.asp?lang=en&parent=T22-TSAG-R-0007) |
| TSAG | Geneva, 29 July – 2 August 2024 | TSAG-[R8](https://itu.int/md/meetingdoc.asp?lang=en&parent=T22-TSAG-R-0008) |

TABLE 2
Rapporteur meetings organized under TSAG during the study period

| Dates | Place/Host | RG | Event name |
| --- | --- | --- | --- |
| 2023-01-31 | E-Meeting | [RG-IEM](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=13590&Group=0) | TSAG RG-IEM e-meeting |
| 2023-02-01 | E-Meeting | [RG-WM](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=13591&Group=0) | TSAG RG-WM e-meeting |
| 2023-02-14 | E-Meeting | [RG-WM](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=13592&Group=0) | TSAG RG-WM e-meeting |
| 2023-02-15 | E-Meeting | [RG-WPR](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=13597&Group=0) | TSAG RG-WPR e-meeting |
| 2023-02-28 | E-Meeting | [RG-WM](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=13593&Group=0) | TSAG RG-WM e-meeting |
| 2023-03-07 | E-Meeting | [RG-IEM](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=13617&Group=0) | TSAG RG-IEM e-meeting |
| 2023-03-09 | E-Meeting | [RG-WTSA](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=13618&Group=0) | TSAG RG-WTSA e-meeting |
| 2023-03-15 | E-Meeting | [RG-WPR](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=13627&Group=0) | TSAG RG-WPR e-meeting |
| 2023-04-04 | E-Meeting | [RG-IEM](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=13675&Group=0) | TSAG RG-IEM e-meeting |
| 2023-04-13 | E-Meeting | [RG-WTSA](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=13676&Group=0) | TSAG RG-WTSA e-meeting |
| 2023-04-18 | E-Meeting | [RG-WM](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=13677&Group=0) | TSAG RG-WM e-meeting |
| 2023-04-19 | E-Meeting | [RG-WPR](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=13698&Group=0) | TSAG RG-WPR e-meeting |
| 2023-04-27 | E-Meeting | [RG-WM](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=13702&Group=0) | TSAG RG-WM e-meeting |
| 2023-05-04 | E-Meeting | [RG-WM](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=13678&Group=0) | TSAG RG-WM e-meeting |
| 2023-05-05 | E-Meeting | [RG-IEM](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=13703&Group=0) | TSAG RG-IEM e-meeting |
| 2023-05-11 | E-Meeting | [RG-WTSA](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=13704&Group=0) | TSAG RG-WTSA e-meeting |
| 2023-05-23 | E-Meeting | [RG-WPR](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=13705&Group=0) | TSAG RG-WPR e-meeting |
| 2023-06-27 | E-Meeting | [RG-WM](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=13894&Group=0) | TSAG RG-WM e-meeting |
| 2023-07-04 | E-Meeting | [RG-WM](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=13895&Group=0) | TSAG RG-WM e-meeting |
| 2023-07-05 | E-Meeting | [RG-WPR](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=13910&Group=0) | TSAG RG-WPR e-meeting |
| 2023-07-24 | E-Meeting | [RG-DT](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=13911&Group=0) | TSAG RG-DT e-meeting |
| 2023-07-27 | E-Meeting | [RG-IEM](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=13912&Group=0) | TSAG RG-IEM e-meeting |
| 2023-09-05 | E-Meeting | [RG-IEM](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=13913&Group=0) | TSAG RG-IEM e-meeting |
| 2023-09-12 | E-Meeting | [RG-WM](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=13896&Group=0) | TSAG RG-WM e-meeting |
| 2023-09-27 | E-Meeting | [RG-DT](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=13916&Group=0) | TSAG RG-DT e-meeting |
| 2023-10-24 | E-Meeting | [RG-WM](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=14068&Group=0) | TSAG RG-WM e-meeting |
| 2023-11-15 | E-Meeting | [RG-WPR](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=14107&Group=0) | TSAG RG-WPR e-meeting |
| 2023-11-17 | E-Meeting | [RG-DT](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=14109&Group=0) | TSAG RG-DT e-meeting |
| 2023-11-21 | E-Meeting | [RG-WM](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=14110&Group=0) | TSAG RG-WM e-meeting |
| 2023-12-05 | E-Meeting | [RG-WM](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=14137&Group=0) | TSAG RG-WM e-meeting |
| 2023-12-12 | E-Meeting | [RG-IEM](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=14138&Group=0) | TSAG RG-IEM e-meeting |
| 2024-02-20 | E-Meeting | [RG-IEM](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=15600&Group=0) | TSAG RG-IEM e-meeting |
| 2024-02-21 | E-Meeting | [RG-WM](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=15599&Group=0) | TSAG RG-WM e-meeting |
| 2024-03-05 | E-Meeting | [RG-DT](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=15606&Group=0) | TSAG RG-DT e-meeting |
| 2024-03-13 | E-Meeting | [RG-WM](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=15601&Group=0) | TSAG RG-WM e-meeting |
| 2024-04-03 | E-Meeting | [RG-WM](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=15602&Group=0) | TSAG RG-WM e-meeting |
| 2024-04-18 | E-Meeting | [RG-WTSA](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=15609&Group=0) | TSAG RG-WTSA e-meeting |
| 2024-04-23 | E-Meeting | [RG-DT](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=15607&Group=0) | TSAG RG-DT e-meeting |
| 2024-04-26 | E-Meeting | [RG-WM](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=15603&Group=0) | TSAG RG-WM e-meeting |
| 2024-05-07 | E-Meeting | [RG-IEM](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=15613&Group=0) | TSAG RG-IEM e-meeting |
| 2024-05-14 | E-Meeting | [RG-WM](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=15604&Group=0) | TSAG RG-WM e-meeting |
| 2024-06-17 | E-Meeting | [RG-IEM](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=15614&Group=0) | TSAG RG-IEM e-meeting |
| 2024-06-18 | E-Meeting | [RG-SOP](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=15620&Group=0) | TSAG RG-SOP e-meeting |
| 2024-06-19 | E-Meeting | [RG-WPR](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=15611&Group=0) | TSAG RG-WPR e-meeting |
| 2024-06-20 | E-Meeting | [RG-WTSA](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=15610&Group=0) | TSAG RG-WTSA e-meeting |
| 2024-06-24 | E-Meeting | [RG-DT](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=15615&Group=0) | TSAG RG-DT e-meeting |
| 2024-07-01 | E-Meeting | [RG-DT](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=15616&Group=0) | TSAG RG-DT e-meeting |
| 2024-07-02 | E-Meeting | [RG-WM](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=15605&Group=0) | TSAG RG-WM e-meeting |
| 2024-09-04 | E-Meeting | [RG-SOP](https://itu.int/net/itu-t/lists/rgmdetails.aspx?id=16038&Group=0) | TSAG RG-SOP e-meeting |

# 2 Organization of work

## 2.1 Organization of studies and allocation of work

**2.1.1** At its first meeting of the study period, TSAG decided to establish 2 Working Parties.

**2.1.2** Table 3 shows the number and title of each working party, together with the Rapporteur Groups assigned to it and the name of its Chair.

**2.1.3** Table 4 lists other groups under TSAG during the study period.

TABLE 3
Organization of TSAG

| Designation | Rapporteur Groups assigned | Title of the Working Party | Chairand Vice-chairs |
| --- | --- | --- | --- |
| WP1/TSAG | RG-WM, RG-WTSA | Working Methods and related WTSA preparations (WP-WMW) | Chair: Mihail Ion (National Authority for Management and Regulation in Communications of Romania, Romania) (from 01/2024); Tobias Kaufmann (Federal Ministry for Economic Affairs and Energy, Germany) (from 03/2022 to 12/2023)Vice-chair: Minah Lee (Ministry of Science and ICT, Rep. of Korea) |
| WP2/TSAG | RG-DT, RG-IEM, RG-WPR | Industry Engagement, Work Programme, Restructuring (WP-IEWPR) | Chair: Gaëlle Martin-Cocher (InterDigital Canada)Vice-chair: Guy-Michel Kouakou (Autorité de Régulation des Télécommunications/TIC, Côte d'Ivoire)  |

NOTE – RG-SOP reported directly to the TSAG plenary.

TABLE 4
Other groups

| Title of the group | (Co-)chair(s) | Vice-chairs |
| --- | --- | --- |
| Focus Group on metaverse (FG-MV) | Shin-Gak Kang (ETRI, Rep. of Korea) | Andrey Perez (Brazil)Hideo Imanaka (NICT, Japan)Per Fröjdh (Ericsson, Sweden)Shane He (Nokia, Finland)Vincent Affleck (United Kingdom)Yuntao Wang (China)Leonidas Anthopoulos (University of Thessaly, Greece)Manuel Barreiro (Aston Group, Mexico)Cristina Martinez (European Commission)Stella Kipsaita (Communications Authority, Kenya)Natalia Bayona (UN Tourism) |
| Collaboration on ITS Communication Standards (CITS) | T. Russell Shields (USA) | – |
| Joint Coordination Activity on Accessibility and Human Factors (JCA-AHF) | Andrea Saks (G3ict, USA) | Christopher Jones (G3ict, USA)Lidia Best (G3ict, USA)Jerry Ellis (Ireland; *in memoriam*)David Fourney (G3ict, USA) |
| Joint Coordination Activity on Digital COVID-19 Certificates (JCA-DCC) | Heung Youl Youm (Soonchunhyang University, Rep. of Korea)Carl Leitner (WHO) | – |
| Joint Coordination Activity on Quantum Key Distribution Network (JCA-QKDN) | Junsen Lai (CAICT, Ministry of Industry and Information Technology, China) | Mark McFadden (United Kingdom)Hao Qin (National University of Singapore, Singapore) |

## 2.2 Rapporteur Groups

**2.2.1** TSAG created Rapporteur Groups listed in Table 5.

TABLE 5
TSAG – Rapporteur Groups

| Rapporteur Groups | Title | WP | Rapporteur |
| --- | --- | --- | --- |
| RG-SOP | Strategic and operational planning | PLEN | Rapporteur: Mr Martínez Vanegas Victor Manuel (Mexico)Associate rapporteurs: Mr Gracie Bruce (Ericsson Canada, Canada), Mr Tian Dao (ZTE Corporation, China) |
| RG-WM | Working methods | 1 | Rapporteur: Mr Dubuisson Olivier (Orange, France)Associate rapporteur: Mr Rushton Phil (DSIT, United Kingdom) |
| RG-WTSA | WTSA preparations | 1 | Rapporteur: Ms Li Fang (Ministry of Industry and Information Technology, China)Associate rapporteurs: Mr Agyekum Samuel (National Communications Authority, Ghana) (from 01/2024), Mr Tonkikh Evgeny (Ministry of Digital Development, Communications and Mass Media, Russian Federation); Mr Boateng Isaac (National Communications Authority, Ghana) (from 03/2022 to 01/2024) |
| RG-DT | Sustainable digital transformation | 2 | Co-rapporteurs: Mr Sharafat Ahmad Reza (Ministry of Information & Communication Technology, Iran); Mr Said Ahmed (National Telecommunication Regulatory Authority, Egypt)Associate rapporteur: Ms Lesufi Cynthia (South Africa) |
| RG-IEM | Industry engagement, metrics | 2 | Rapporteur: Mr Parsons Glenn (Ericsson Canada)Associate rapporteurs: Mr Luo (Noah) Zhong (Huawei Technologies, China); Mr Taddei Arnaud (Broadcom Corporation, United States) |
| RG-WPR | Work programme and restructuring, SG work, SG coordination | 2 | Rapporteur: Ms Naganuma Miho (NEC Corporation, Japan)Associate rapporteur: Mr Ratta Greg (National Telecommunications and Information Administration, United States) (2022/03-09/2023) |

TABLE 6
TSAG – New Questions adopted and Rapporteurs

| Questions | Title of the Questions | WP | Rapporteur |
| --- | --- | --- | --- |
| Not applicable. |  |  |  |

TABLE 7
TSAG – Questions deleted

| Questions | Title of Questions | Rapporteurs | Results |
| --- | --- | --- | --- |
| Not applicable. |  |  |  |

# 3 Results of the work accomplished during the 2022-2024 study period

## 3.1 General

During the study period, TSAG examined 111 contributions and generated a large number of TDs and liaison statements. It also:

– drew up two new Recommendations;

– amended/revised two existing Recommendations;

– developed two new and two revised supplements, and a briefing note for WTSA ad hoc group chairs and drafting group chairs;

– suppressed one supplement and two Recommendations.

## 3.2 Highlights of achievements

The main results achieved by TSAG are briefly summarized below.

### a) Working Party 1/TSAG achievements

– Developed new Recommendations ITU-T A.18, A.24 (replacing withdrawn Recommendations A.4 and A.6), and revised Recommendations ITU-T A.7 and A.8.

– Developed new A-series Supplements 6 and 7, revised A-series Supplements 2 and 4, and withdraw A-series Supplement 5.

– Developed [ASBN-AHDGC](https://itu.int/oth/T1801000004) *"Briefing note for WTSA ad hoc group chairs and drafting group chairs"* (see [WTSA-24 INFO-03](https://itu.int/md/T22-WTSA.24-INF-0003/en))

– Progressed discussions on Recommendation ITU-T A.1 (see [WTSA-24 INFO-02](https://itu.int/md/T22-WTSA.24-INF-0002/en), *Current Draft of Revised ITU-T A.1 "Working methods for study groups of the ITU Telecommunication Standardization Sector"*).

– Agreed to propose to WTSA-24 the suppression of WTSA Resolution 80 "*Acknowledging the active involvement of the membership in the development of ITU Telecommunication Standardization Sector deliverables*", see [WTSA-24 Doc.25](https://itu.int/md/T17-WTSA.20-C-0025).

– Progressed discussions on WTSA Resolution 22 "*Authorization for the Telecommunication Standardization Advisory Group to act between world telecommunication standardization assemblies*", which was submitted for information of WTSA-24 in Appendix I of [WTSA-24 Doc.25](https://itu.int/md/T17-WTSA.20-C-0025).

### b) Working Party 2/TSAG achievements

– Agreed to propose the consolidation of ITU-T SG9 and SG16 into a new study group, provisionally referred to as new Study Group C, as found in [Annex 2](#Annex2).

– Developed an action plan for a vibrant engagement of the industry (see [Annex 3](#Annex3)).

– Held the ITU-T Industry Engagement Workshop" (19 April 2024), see [https://itu.int/en/‌ITU-T/Workshops-and-Seminars/2024/0419](https://itu.int/en/ITU-T/Workshops-and-Seminars/2024/0419).

– Agreed to propose to WTSA-24 to develop a new WTSA Resolution [TSAG-DT] on sustainable digital transformation (see text in [WTSA-24 Doc.25](https://itu.int/md/T17-WTSA.20-C-0025)).

– Agreed to propose to WTSA-24 to revise Resolution 68 "*Evolving role of industry in the ITU Telecommunication*" (see text in [WTSA-24 Doc.25](https://itu.int/md/T17-WTSA.20-C-0025)).

### c) Rapporteur Group achievements

– Rapporteur Group achievements are contained in TSAG-[R1](https://itu.int/md/meetingdoc.asp?lang=en&parent=T22-TSAG-R-0001), [2](https://itu.int/md/meetingdoc.asp?lang=en&parent=T22-TSAG-R-0002), [4](https://itu.int/md/meetingdoc.asp?lang=en&parent=T22-TSAG-R-0004) and [8](https://itu.int/md/meetingdoc.asp?lang=en&parent=T22-TSAG-R-0008).

## 3.3 Report of lead study group activities, JCAs and regional groups

### 3.3.1 Lead study group activities

Not applicable to TSAG.

#### 3.3.2 Joint Coordination Activities (JCA) under TSAG

#### 3.3.2.1 JCA on Accessibility and Human factors (JCA-AHF)

JCA-AHF has been established in December 2007. Information on this JCA is contained in TSAG-[R1](https://itu.int/md/meetingdoc.asp?lang=en&parent=T22-TSAG-R-0001), [2](https://itu.int/md/meetingdoc.asp?lang=en&parent=T22-TSAG-R-0002), [4](https://itu.int/md/meetingdoc.asp?lang=en&parent=T22-TSAG-R-0004), [8](https://itu.int/md/meetingdoc.asp?lang=en&parent=T22-TSAG-R-0008) and its web page at <https://itu.int/en/ITU-T/jca/ahf/>.

#### 3.3.2.2 JCA on Digital COVID-19 Certificates (JCA-DCC)

JCA-DCC has been established in October 2021. Information on this JCA is contained in TSAG-[R1](https://itu.int/md/meetingdoc.asp?lang=en&parent=T22-TSAG-R-0001), [2](https://itu.int/md/meetingdoc.asp?lang=en&parent=T22-TSAG-R-0002), [4](https://itu.int/md/meetingdoc.asp?lang=en&parent=T22-TSAG-R-0004), [8](https://itu.int/md/meetingdoc.asp?lang=en&parent=T22-TSAG-R-0008) and its web page at <https://itu.int/en/ITU-T/jca/dcc>.

#### 3.3.2.3 JCA on Quantum Key Distribution Network (JCA-QKDN)

JCA-QKDN has been established in December 2022. Information on this JCA is contained in TSAG-[R1](https://itu.int/md/meetingdoc.asp?lang=en&parent=T22-TSAG-R-0001), [2](https://itu.int/md/meetingdoc.asp?lang=en&parent=T22-TSAG-R-0002), [4](https://itu.int/md/meetingdoc.asp?lang=en&parent=T22-TSAG-R-0004), [8](https://itu.int/md/meetingdoc.asp?lang=en&parent=T22-TSAG-R-0008) and its web page at <https://itu.int/en/ITU-T/jca/qkdn>.

### 3.3.3 Regional Groups under TSAG

None.

### 3.3.4 Focus Group on metaverse (FG-MV)

FG-MV was established in December 2022 under TSAG and concluded in June 2024. Information on this FG is contained in TSAG-[R1](https://itu.int/md/meetingdoc.asp?lang=en&parent=T22-TSAG-R-0001), [2](https://itu.int/md/meetingdoc.asp?lang=en&parent=T22-TSAG-R-0002), [4](https://itu.int/md/meetingdoc.asp?lang=en&parent=T22-TSAG-R-0004), [8](https://itu.int/md/meetingdoc.asp?lang=en&parent=T22-TSAG-R-0008) and its web page at <https://itu.int/en/ITU-T/focusgroups/mv>.

## 3.4 Other results from TSAG

### 3.4.1 Establish/revise/terminate Questions during the study period

TSAG has reviewed and endorsed the modified Q1/17 text including the movement of incubation mechanisms from Q15/17 to Q1/17 in SG17 at the TSAG meeting 29 July – 2 August 2024 (see TSAG-[R8](https://itu.int/md/meetingdoc.asp?lang=en&parent=T22-TSAG-R-0008) for more information). There were no other changes in Questions in any other study groups in the study period.

### 3.4.2 WTSA action plan, PP action plan

TSAG noted at every meeting TSB's "WTSA-20 Action Plan" which is a monitoring and reporting tool to keep track of the implementation of WTSA Resolutions.

### 3.4.3 Bridging Standardization Gap (BSG), cooperation with ITU Regional Offices, and Sustainable Development Goals (SDGs)

TSAG noted the TSB reports on Bridging the Standardization. In addition, an information session on the new BSG program organized by the TSB Director was provided during the TSAG meeting in January 2024.

### 3.4.4 ITU-T Standardization Committee for Vocabulary (SCV)

TSAG noted reports from SCV at every meeting.

### 3.4.5 Academia, Kaleidoscope, ITU-T Journal

TSAG noted the reports from the annual ITU Kaleidoscope events; TSB provided evaluations of the papers of the Kaleidoscope events with respect to relevance in ITU activities.

TSAG took note of the reports on the *ITU Journal: ICT Discoveries.*

### 3.4.6 Meeting Plan

At each meeting, TSAG examined and endorsed the meeting calendar for study groups and working parties for the coming years.

### 3.4.7 Strategic & operational plan (SOP)

At each meeting, TSAG noted the reports on Strategic & operational plan (SOP).

### 3.4.8 IEC, ISO, and the IEC-ISO-ITU-T Standardization Programme Coordination Group (SPCG).

TSAG appointed Ms Miho Naganuma (NEC Corporation, Japan), Mr Per Fröjdh (Telefon AB – LM Ericsson, Sweden), Mr Ajit Jillavenkatesa (United States), Mr Olivier Dubuisson (Orange, France) and Mr Zhicheng Qu (ZTE Corporation, China) as representatives to the SPCG in December 2022 at its first meeting. TSAG noted the reports on SPCG at TSAG meetings.

TSAG management team appointed Mr Shigeru Miyake (Hitachi Ltd) as the ITU-T Liaison Officer to ISO/IEC JTC 1 on 22 August 2022. TSAG noted the liaison reports on ISO/IEC JTC 1 at TSAG meetings.

### 3.4.9 Inter-Sector Coordination Group (ISCG)

TSAG management team appointed Mr Abdurahman Al Hassan (TSAG Chair), Mr Dominique Würges (SG5 Chair) and Mr Noah Luo (SG16 Chair) as representatives to the ISCG on 22 August 2022. TSAG appointed Mr Phil Rushton (United Kingdom) as representative to the ISCG on remote participation in December 2022 at its first meeting. TSAG noted the reports on ISCG at TSAG meetings.

# 4 Observations concerning future work

TSAG will continue its work according to Article 14A of the ITU Convention, WTSA Resolutions 1, 22, 40, 45, and other relevant Resolutions.

ANNEX 1

List of Recommendations, Supplements and
other materials produced or deleted during the study period

The list of new and revised Recommendations approved during the study period is found in Table 8.

The list of Recommendations determined by TSAG or its working parties that were not yet approved at the time this report was published is found in Table 9.

The list of Recommendations deleted by TSAG during the study period is found in Table 10.

The List of Recommendations submitted by TSAG to WTSA-24 for approval is found in Table 11.

Tables 12 onwards list other publications approved and/or deleted by TSAG during the study period.

TABLE 8
TSAG – Recommendations approved during the study period

| Recommendation | Approval | Status | TAP/‌AAP | Title |
| --- | --- | --- | --- | --- |
| [A.7](https://itu.int/itu-t/workprog/wp_item.aspx?isn=18922) (Rev.) | 2024-08-02 | In force | TAP | Focus groups: Establishment and working procedures |
| [A.8](https://itu.int/itu-t/workprog/wp_item.aspx?isn=18923) (Rev.) | 2024-01-26 | In force | TAP | Alternative approval process for new and revised ITU T Recommendations |
| [A.18](https://itu.int/itu-t/workprog/wp_item.aspx?isn=19290) (New, ex A.JCA) | 2024-07-29 | In force | TAP | Joint coordination activities: Establishment and working procedures |
| [A.24](https://itu.int/itu-t/workprog/wp_item.aspx?isn=19289) (New) | 2024-08-02 | In force | TAP | Collaboration and exchange of information with other organizations |

TABLE 9
TSAG – Recommendations under approval as of publication of this report

| Recommendation | Consent/ Determination | TAP/‌AAP | Title |
| --- | --- | --- | --- |
| None. |  |  |  |

TABLE 10
TSAG – Recommendations deleted during study period

| Recommendation | Last version | Withdrawal date | Title |
| --- | --- | --- | --- |
| A.4 | 2012 | 2024-08-02 | Communication process between the ITU Telecommunication Standardization Sector and forums and consortia |
| A.6 | 2012 | 2024-08-02 | Cooperation and exchange of information between the ITU Telecommunication Standardization Sector and national and regional standards development organizations |

TABLE 11
TSAG – Recommendations submitted to WTSA-24

| Recommendation | Proposal | Title | Reference |
| --- | --- | --- | --- |
| None. |  |  |  |

TABLE 12
TSAG – Supplements

| Supplement | Date | Status | Title |
| --- | --- | --- | --- |
| [A-Suppl.2](https://itu.int/itu-t/workprog/wp_item.aspx?isn=18699) | 2022-12-16 | In force | Guidelines on interoperability experiments and proof-of-concept events |
| [A-Suppl.4](https://itu.int/itu-t/workprog/wp_item.aspx?isn=18700) | 2022-12-16 | In force | Guidelines for remote participation |
| [A-Suppl.5](https://itu.int/rec/T-REC-A/recommendation.asp?lang=en&parent=T-REC-A.Sup5) | 2024-08-02 | Deleted | Guidelines for collaboration and exchange of information with other organizations |
| [A-Suppl.6](https://itu.int/itu-t/workprog/wp_item.aspx?isn=19291) | 2024-08-02 | In force | Guidelines for the development of a standardization gap analysis |
| [A-Suppl.7](https://itu.int/itu-t/workprog/wp_item.aspx?isn=18701) | 2024-08-02 | In force | WTSA preparation guideline on Resolutions |

TABLE 13
TSAG – Technical Papers

| Document | Date | Status | Title |
| --- | --- | --- | --- |
| None. |  |  |  |

TABLE 14
TSAG – Technical Reports

| Document | Date | Status | Title |
| --- | --- | --- | --- |
| None. |  |  |  |

TABLE 15
TSAG – Other publications

| Document | Date | Status | Title |
| --- | --- | --- | --- |
| [ASBN-AHDGC](https://itu.int/oth/T1801000004) | 2024-08-02 | New | Briefing note for WTSA ad hoc group chairs and drafting group chairs |

ANNEX 2

New Study Group C proposed to WTSA-24

TSAG agreed to submit to WTSA-24 the following as the new Study Group C (formed from the consolidation of ITU-T Study Groups 9 and 16):

– WTSA Resolution 2 elements (title, general areas of study, lead roles, points of guidance and list of Recommendations under its responsibility), found in [Annex 2.1](#Annex2_1) hereinafter;

– Set of Questions listed in Table 2.1, which indicates the provisional Question number, title, history (status), and the document where the text can be found. The set comprises the Questions proposed by SG9 and SG16 respectively in WTSA-24 [C8](https://itu.int/md/T22-WTSA.24-C-0008/en) and [C18](https://itu.int/md/T22-WTSA.24-C-0018/en), with the *exception* of Questions J/9 (ex 10/9) and A/16 (ex 1/16) that are *replaced* by Q.Coord/C found in [Annex 2.2](#Annex2_2) of this report *and* Questions K/9 (ex 11/9) and L/16 (ex 26/16) that are *replaced* by Q.Acc/C found in [Annex 2.3](#Annex2_3) of this report.

Table 2.1 – List of 23 initial Questions proposed for SGC

| Question number | Question title | Status | Found in |
| --- | --- | --- | --- |
| A/9 | Transmission and delivery control of television and sound programme signal for contribution, primary distribution and secondary distribution | Continuation of Q1/9 | [WTSA-24 C8](https://itu.int/md/T22-WTSA.24-C-0008/en) (Rev.1) |
| B/9 | Methods and practices for conditional access and content protection | Continuation of Q2/9 | [WTSA-24 C8](https://itu.int/md/T22-WTSA.24-C-0008/en) (Rev.1) |
| C/9 | AI-enabled enhanced functions over integrated broadband cable network | Continuation of Q3/9 | [WTSA-24 C8](https://itu.int/md/T22-WTSA.24-C-0008/en) (Rev.1) |
| D/9 | Guidelines for developing countries to implement and deploy digital cable television networks | Continuation of Q4/9 | [WTSA-24 C8](https://itu.int/md/T22-WTSA.24-C-0008/en) (Rev.1) |
| E/9 | Software frameworks and architectures for advanced content distribution services over integrated broadband cable networks | Continuation of Q5/9 | [WTSA-24 C8](https://itu.int/md/T22-WTSA.24-C-0008/en) (Rev.1) |
| F/9 | Functional requirements for terminal devices of the integrated broadband cable networks | Continuation of Q6/9 | [WTSA-24 C8](https://itu.int/md/T22-WTSA.24-C-0008/en) (Rev.1) |
| G/9 | Transmission control and interfaces (MAC layer) for IP and/or packet-based data over integrated broadband cable networks | Continuation of Q7/9 | [WTSA-24 C8](https://itu.int/md/T22-WTSA.24-C-0008/en) (Rev.1) |
| H/9 | The Internet Protocol (IP) enabled multimedia applications and services for cable television networks enabled by converged platforms | Continuation of Q8/9 | [WTSA-24 C8](https://itu.int/md/T22-WTSA.24-C-0008/en) (Rev.1) |
| I/9 | Requirements, methods, and interfaces of the advanced service platforms to enhance the delivery of audiovisual content, and other multimedia interactive services over integrated broadband cable networks | Continuation of Q9/9 | [WTSA-24 C8](https://itu.int/md/T22-WTSA.24-C-0008/en) (Rev.1) |
| B/16 | Artificial intelligence-enabled multimedia applications | Continuation of Q5/16 | [WTSA-24 C18](https://itu.int/md/T22-WTSA.24-C-0018) |
| C/16 | Visual, audio and signal coding | Continuation of Q6/16 | [WTSA-24 C18](https://itu.int/md/T22-WTSA.24-C-0018) |
| D/16 | Immersive live experience systems and services | Continuation of Q8/16 | [WTSA-24 C18](https://itu.int/md/T22-WTSA.24-C-0018) |
| E/16 | Multimedia systems, terminals, gateways and data conferencing | Continuation of Q11/16 | [WTSA-24 C18](https://itu.int/md/T22-WTSA.24-C-0018) |
| F/16 | Intelligent visual systems and services | Continuation of Q12/16 | [WTSA-24 C18](https://itu.int/md/T22-WTSA.24-C-0018) |
| G/16 | Multimedia streaming-related systems and services including content delivery, application platforms and end systems | Continuation of Q13/16 | [WTSA-24 C18](https://itu.int/md/T22-WTSA.24-C-0018) |
| H/16 | Multimedia framework, applications and services | Continuation of Q21/16 | [WTSA-24 C18](https://itu.int/md/T22-WTSA.24-C-0018) |
| I/16 | Multimedia aspects of distributed ledger technologies and related services | Continuation of Q22/16 | [WTSA-24 C18](https://itu.int/md/T22-WTSA.24-C-0018) |
| J/16 | Digital culture-related systems and services | Continuation of Q23/16 | [WTSA-24 C18](https://itu.int/md/T22-WTSA.24-C-0018) |
| K/16 | Human factors for intelligent user interfaces and services | Continuation of Q24/16 | [WTSA-24 C18](https://itu.int/md/T22-WTSA.24-C-0018) |
| M/16 | Vehicular multimedia communications, systems, networks, and applications | Continuation of Q27/16 | [WTSA-24 C18](https://itu.int/md/T22-WTSA.24-C-0018) |
| N/16 | Multimedia framework for digital health applications | Continuation of Q28/16 | [WTSA-24 C18](https://itu.int/md/T22-WTSA.24-C-0018) |
| Q.Coord/C | Coordination and planning | Continuation of Q10/9 and Q1/16 | [WTSA-24 C24](https://itu.int/md/T22-WTSA.24-C-0024) Annex 2.2 |
| Q.Acc/C | Multimedia system, service and application accessibility for digital inclusion | Continuation of Q11/9 and Q26/16 | [WTSA-24 C24](https://itu.int/md/T22-WTSA.24-C-0024) Annex 2.3 |

## ANNEX 2.1 WTSA Resolution 2 elements for SGC

Annex A
(to Resolution 2 (Rev. New Delhi, 2024))

Part 1 – General areas of study

ITU-T SGC

Technologies for multimedia, content delivery and cable television

ITU‑T Study Group C is responsible for studies relating to multimedia technologies, capabilities, systems, applications and services for existing and future networks, including IP-based and cable-based networks.

This encompasses studies relating to:

• information and communication technologies (ICTs) for multimedia systems, applications, services, terminals and delivery platforms; accessibility for digital inclusion; ICTs for active assisted living; human interfaces; multimedia aspects of distributed ledger technologies; media and signal coding and systems; digital multimedia services in various verticals (health, culture, mobility, etc.); and multimedia aspects of metaverse related issues.

• use of telecommunication systems for a) contribution, primary distribution and secondary distribution of audiovisual content (including television programmes and related data services, and advanced capabilities, e.g. ultra-high definition, high-dynamic range) and b) multimedia applications, providing and immersive, virtual reality, augmented reality and multiview, including 3D (stereoscopy type and holographic type);

• use of telecommunication networks, e.g. coaxial cable, optical fibre, hybrid fibre coaxial (HFC), IP networks, etc., to also provide integrated broadband services including interconnection with other types of networks such as fixed wireless access networks (e.g., radio local access network, private IMT-2020 network and beyond, etc.);

NOTE 1 – Private IMT-2020 network is intended to refer to private wireless networks specifically designed for supplementing a cable TV access network.

NOTE 2 – The cable network, primarily designed for audiovisual content delivery to the home, also carries time‑critical services like voice, gaming, video-on-demand, interactive and multiscreen services, etc. to customer premises equipment (CPE) in the home or enterprise.

• use of cloud computing, artificial intelligence (AI) and other advanced technologies to enhance multimedia applications and services as well as integrated broadband services over telecommunication networks;

NOTE 3 – When ITU-T Study Group 16 was created in 1996, one of its mandates was to continue ITU-T Study Group 1's studies on multimedia services. Accordingly, reference to "services" in the context of Study Group C's mandate is to be understood as "multimedia services".

Part 2 – Lead ITU‑T study groups in specific areas of study

SGC Lead study group on multimedia technologies, applications, systems and services
Lead study group on integrated broadband cable networks
Lead study group on audiovisual content processing and delivery over multimedia distribution systems, including cable networks, IP-based television services and digital signage
Lead study group on human factors and ICT accessibility for digital inclusion
Lead study group on multimedia aspects of automotive-related intelligent services
Lead study group on multimedia aspects of digital health
Lead study group on digital culture
Lead study group on multimedia aspects of distributed ledger technology (DLT) and its applications
Lead study group on immersive multimedia technologies including metaverse and other emerging technologies

Annex B
(to Resolution 2 (New Delhi, 2024))

Points of guidance to ITU‑T study groups for development
of the post-2022 work programme

**B.1** This annex provides points of guidance to study groups for the development of post‑2022 study Questions in accordance with their proposed structure and general areas of responsibility. The points of guidance are intended to clarify, where appropriate, interaction between study groups in certain areas of common responsibility, and are not intended to provide a comprehensive list of such responsibilities.

**B.2** This annex will be reviewed by the Telecommunication Standardization Advisory Group (TSAG) as necessary to facilitate interaction between study groups, to minimize duplication of effort and to harmonize the overall ITU‑T work programme.

**...**

ITU-T Study Group C

ITU‑T Study Group C will work on the following items:

• terminology for various multimedia services;

• operation of multimedia systems and applications, including interoperability, scalability and interworking over different networks;

• ubiquitous multimedia services and applications;

• multimedia aspects of digital services;

• development of multimedia end-to-end architectures, including vehicle gateway for intelligent transport systems (ITS);

• high-layer protocols and middleware for multimedia systems and applications, including IP-based television services (managed and non-managed networks), Internet-based streaming media services and digital signage;

• media and signal coding;

• multimedia and multimode terminals;

• human-machine interaction;

• signal processing network equipment and terminals, gateway implementations, and characteristics;

• quality of service (QoS), quality of experience (QoE) and end-to-end performance in multimedia systems;

• security and trust of multimedia systems and services;

• secured audiovisual content contribution and distribution, for example conditional access (CA) systems and digital rights management (DRM), over cable networks;

• multimedia aspects of distributed ledger technology (DLT) and its applications;

• digital multimedia services and applications in various vertical industries;

• multimedia aspects of metaverse technologies, applications, systems and services, including functional architecture, and platform interoperability;

• audiovisual content systems for contribution and distribution, including broadcasting, over telecommunication networks, e.g. coaxial cable, optical fibre, hybrid fibre coaxial (HFC), IP networks, etc., which could be applied also to satellite and/or terrestrial content distribution;

• interconnection between cable networks and other types of networks such as fixed wireless access network (e.g., radio local access network, private IMT-2020 network and beyond, etc.);

• the use of IP or other appropriate protocols, middleware and operating systems to provide time-critical services, services on demand, interactive services or service migrations from radio frequency (RF) to IP over cable distribution networks;

• procedures for the operation of audiovisual content delivery over cable networks;

• AI-enabled multimedia systems and applications, including AI-assisted delivery and transmission for audiovisual content and other data services, taking into account responsible/trustworthy/explainable AI principles;

• cable network terminals and related interfaces (e.g. interfaces to home network devices, such as IoT devices, interfaces to the cloud);

• end-to-end integrated platforms for cable networks;

• advanced, interactive, time-critical and other services and applications over cable networks;

• cloud-based systems for audiovisual content services and control over cable networks;

• multimedia content processing and delivery including extended reality (e.g., augmented reality, virtual reality and mixed reality), immersive environments, virtual worlds, and metaverse;

• multimedia system, service and application accessibility for digital inclusion;

• common user profile and participation taxonomy for broadband cable-TV accessibility.

In developing its studies, Study Group C will take into consideration societal and ethical aspects of intelligent applications.

ITU-T Study Group C will work collaboratively with all stakeholders working in the standardization areas within its mandate, in particular with other ITU study groups, other United Nations agencies, international and regional standards-development organizations, industry forums and consortia.

Study Group C will develop and maintain implementation guidelines to support the deployment of its Recommendations in developing countries.

Study Group C is responsible for coordination with the ITU Radiocommunication Sector (ITU‑R) on broadcasting matters.

Inter-Sector rapporteur group activities of different Sectors and/or joint rapporteur group activities of different study groups shall be seen as complying with the WTSA expectations for collaboration and coordination.

**...**

Annex C
(to Resolution 2 (Rev. New Delhi, 2024))

List of Recommendations under the responsibility of the respective
ITU‑T study groups and TSAG in the 2025-2028 study period

**...**

ITU-T Study Group C

ITU-T E.120 – ITU-T E.139 (except ITU-T E.129), ITU-T E.161, ITU-T E.180-series, ITU-T E.330-series, ITU-T E.340-series

ITU‑T F.700-series, except those under the responsibility of Study Group 20, and ITU-T F.900-series

ITU‑T G.160-series, ITU‑T G.710  ITU‑T G.729 (except ITU‑T G.712), ITU‑T G.760‑series (including ITU‑T G.769/Y.1242), ITU‑T G.776.1, ITU‑T G.799.1/ Y.1451.1, ITU‑T G.799.2, ITU‑T G.799.3

ITU‑T H-series, except those under the responsibility of Study Group 20

ITU‑T J-series, except those under the responsibility of Study Groups 12 and 15

ITU‑T N-series

ITU‑T T-series

ITU‑T Q.50-series, ITU‑T Q.115-series

ITU‑T V-series, except those under the responsibility of Study Groups 2 and 15

ITU‑T X.26/V.10 and ITU‑T X.27/V.11

**...**

## ANNEX 2.2 Text for Q.Coord/C

###### DRAFT QUESTION Q.Coord/CCoordination and planning

(Continuation of Questions 10/9 and 1/16)

1 Motivation

ITU‑T Study Group C has been assigned lead study group roles, and coordination is a major responsibility within the lead study group roles.

The objective of this Question is to coordinate and manage the development and progress of standardization, within Study Group C and externally. This Question facilitates coordination for the many aspects for which Study Group C is responsible across ITU-T, ITU-R and ITU-D study groups as well as other related bodies.

In that role, this Question may serve as a hub for handling TDs, contributions and liaison statements when they are not directly related to Questions already under study. The technical studies themselves will be addressed in the relevant Questions of Study Group C.

Additionally, this Question serves as a coordinator within Study Group C for horizontal matters such as terminology, bridging the standardization gap, electronic working methods (EWM), ICT, environment, climate change and circular economy, non-radio aspects of international mobile telecommunications, conformance and interoperability testing and standardization roadmaps.

2 Study items

Study items to be considered include, but are not limited to:

– coordination across Questions within the study group to ensure consistency, and avoid duplication of efforts;

– coordination with various joint coordination activities (JCAs) and other external key players working on the SGC topics, when the subject covers various SGC Questions;

– when considering new topics for Study Group C, identification of actions that are needed to address contributions not related to existing Study Group C Questions;

– identification of the results of workshops, TSB initiatives, and actions of other study groups or SDOs that need to be considered under Study Group C work programme;

– coordinate the promotion of study group work via organization of events (such as workshops and webinar series) and development of promotional materials and website content (reference implementations, tutorials, etc.)

– collection and sharing of terms and definitions of J-series Recommendation in collaboration with the Study Group C Rapporteurs for vocabulary;

– responses to incoming liaison statements that cut across several Questions.

3 Tasks

Tasks include, but are not limited to:

– develop and update a standardization vision through an appropriate communication process amongst all interested parties, including the organization of workshops;

– document and agree the processes for coordination, using appropriate coordination mechanisms, negotiate with the relevant bodies to ensure that overlapping efforts are avoided, all required standards are being addressed, and the need for devices (e.g. gateways), which is used to ensure end-to-end interoperability, is minimized;

– cooperate with ITU-D and serve as focal points in the study group in collaboration with relevant Questions if necessary for bridging the standardization gap between developing and developed countries based on WTSA Resolution 44;

– coordinate on terms and definitions and serve as a focal point (as per WTSA Resolution 67), and maintain cable related terms and definitions in Recommendation ITU-T J.1;

– maintain the J- and N-series Recommendations that are not under the responsibility of other existing SGC Questions.

4 Relationships

Recommendations:

– E, F, G, H, I, J, N, Q, T, V, X, Y-series Recommendations

Questions:

– All Questions of Study Group C

Study groups

– All ITU study groups, ITU CCT, and ITU-T TSAG and other groups

Other bodies

– Relevant forums and consortia

WSIS Action Lines:

– C2, C3, C5, C6, C9, C11

Sustainable Development Goals:

– 9

## ANNEX 2.3 Text for Q.Acc/C

###### DRAFT QUESTION Q.Acc/CMultimedia system, service and application accessibility for digital inclusion

(Continuation of Q11/9 and Q26/16)

1 Motivation

The capability to handle different information media and control actions varies within wide boundaries amongst users of telecommunication and multimedia services. The variation may come from age-related functional limitations, disabilities, or other natural causes. With the ageing populations in large parts of the world, many users will have sensory and motor limitations. It is important to meet this wide variety in capabilities in the original design of telecommunication services and systems, so that an increasing number of users can make use of the mainstream telecommunication services. Legislation in many countries is also beginning to follow the trend of requiring universal design, as defined by the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD), in all forms of communication services and devices, as well as Sustainable Development Goals (SDGs).

Multimedia systems and services have great potential to provide valuable and accessible information in a way that the individual user can control, if care is taken from the beginning in universal design of these services and systems, making them accessible to as many users as possible.

Among different audiovisual media, television is the oldest and by so far the most popular one. With advent of electronic technologies, it is changing its role from a one-to-many broadcasting media to an interactive system. Using systems like WebTV or Hybrid TV, users can interact with both broadcasting program and webpages using TV. This interactive role also enhances TV's role to offer accessibility not only to people with different range of abilities but also to foreign language speakers, elderly people and users in situation impairment like inside moving vehicle. In addition, extended reality (XR), which includes augmented reality (AR), virtual reality (VR) and mixed reality (MR), and emerging technologies such as metaverse will augment the role of audiovisual media in everyday lives.

The accessibility activities in Study Group C and its predecessors have created the following documents:

– ITU-T V.18 for real time text telephony;

– ITU-T T.140 as the general presentation protocol for real time text conversation;

– ITU-T T.134 for real time text conversation in T.120 data conferencing environments;

– Annex G to ITU-T H.323 for real time text conversation in H.323 packet multimedia environment;

– Annex L to ITU-T H.324 for real time text conversation in low bit-rate multimedia applications;

– ITU-T F.703 – Multimedia conversation service description. Includes definitions of the accessible conversational services, i.e., total conversation;

– H-series Supplement 1 – Application profile – Sign language and lip-reading real-time conversation using low bit-rate video communication;

– ITU-T F.790 – Telecommunications accessibility guidelines for older persons and persons with disabilities;

– ITU-T F.791 – Accessibility terms and definitions;

– ITU-T H.702 – Accessibility profiles for IPTV systems;

– ITU-T F.930 – Multimedia relay services;

– ITU-T F.921 – Audio-based indoor and outdoor network navigation system for persons with vision impairment;

– ITU-T F.922 – Requirements of information service system for visually impaired persons;

– ITU-T Technical Paper FSTP-AM – Guidelines for accessible meetings;

– ITU-T Technical Paper FSTP-ACC-RemPart – Guidelines for supporting remote participation in meetings for all;

– ITU-T Technical Paper HSTP.ACC-UC – Use cases for inclusive media access services;

– ITU-T Technical Paper FSTP-TACL – Telecommunications accessibility checklist;

– ITU-T Technical Paper FSTP-WebVRI – Guidelines on Web-based remote sign language interpretation (VRI).

– ITU-T Technical Report TR.CUP – Concept of a common user profile format used to personalize audiovisual media

Complemented by a number of additions to other Recommendations, the total conversation concept was founded for conversation in video, text and voice as an accessible superset of video telephony, text telephony and voice telephony.

The task of this Question is to engage in standardization activities leading to services systems and applications that apply the universal design concept, in line with the UN CRPD, European Union Accessibility Directive and other national legislation of Member States.

This Question plans to investigate accessibility of audiovisual content for viewing and listening experiences with a wide range of delivery platforms, including extended reality (XR) (e.g., augmented reality (AR), virtual reality (VR) and mixed reality (MR)), immersive environments, virtual worlds, and metaverse.

Consideration should be given to services in new generation networks with fixed as well as mobile features.

The group also has a task to promote and enhance accessibility as a normal part of ITU work.

2 Study items

Study items to be considered include, but are not limited to:

– clauses on accessibility issues in relevant Recommendations, declaring how inclusive design is achieved, as requested by ITU Plenipotentiary Conference Resolution 175 (rev. Bucharest 2022) and by the UNCRPD and SDGs;

– support for wide performance limits in production, perception and control of each medium in communication services to allow for maximum usability in accordance with the principles of universal design. Specifically, study profiling of the latest video coding standards to fulfil sign language and lip-reading needs at very low bit rates and in error prone environments;

– study potential accessibility benefits offered by emerging technologies, such as immersive environments, virtual worlds, metaverse, artificial intelligence, independent living, home automation, communication between smart things (IoT), cloud-based service and smart homes;

– specification of interfaces on communication equipment to allow various forms of user interface equipment to be attached in order to enable session and device control and media handling by persons with varying capabilities and preferences;
NOTE – Examples of what the interfaces should support include: talking menus, keyboards, pointing devices, listening and viewing devices, Braille and voice call control, text conversation input and output;

– multimedia services including mechanisms for transformation between different media forms of the same content in order to adapt to the capabilities and preferences of end users. Such mechanisms may be automatic, for example text-to-speech, or performed by people, for example sign language interpretation and

 – auto-translation requirements to enable accessibility to common languages, where applicable;

– requirements and mechanisms for user selectable media (such as captioning and sub-titles for various usage scenarios) and multi-platform common user profile formats to enable accessibility, including its production, storage, transport, presentation and logical linking;

– investigate accessibility of emerging input technologies applicable to multimedia content delivery, such as second screen and gesture recognition.

– specification of accessible services using wireless telecommunication technologies, and using wireless short-range technologies for provision of convenient accessible features on communications equipment;

– mechanisms for interworking with mono-media services in an accessible way (e.g. text telephony and voice telephony);

– maintenance of the total conversation concept, and its inclusion in any new multimedia conversation protocol;

– study the requirements on multimedia metadata from an accessibility point of view to encourage universal design in this field;

– study access to emergency services and early warning services by persons with disabilities and specific needs with a wide range of communication channels, e.g. text, sign language, and lip-reading supported speech, audio description, and braille;

– study mechanisms for disability-inclusive disaster risk reduction.

– propose a common taxonomy of use cases for accessible audiovisual media in content delivery systems.

– in collaboration with the IRG-AVA, investigating a common framework to offer accessibility across various media and delivery platforms.

– investigate accessibility of audiovisual delivery for content distribution networks.

– investigate challenges of providing accessibility services for audiovisual content in developing countries using different delivery platforms.

3 Tasks

Tasks include, but are not limited to:

– develop common user profile format addressing the needs of persons with accessibility restrictions, that could be utilized by different media and platforms;

– optimize positioning of visual accessibility features (like signing, closed captioning) in content distribution systems and related advanced services (e.g. XR/AR/VR/MR or metaverse);

– assist in the development of guidelines to improve accessibility and usability for emerging new devices such as head-mounted displays (HMD) supporting XR (e.g., AR, VR, MR), immersive environments, virtual worlds, and metaverse;

– develop auto-translation requirements for multilingual support using artificial intelligence, natural language processing, and other emerging technologies.

– contribute to the continued harmonization and maintenance of the real time text telephone service, for example when new technologies are specified for PSTN or IP transmission;

– develop guidance for implementers of interfaces between communication devices and user interface devices;

– develop Recommendations and guidelines to improve accessibility to audiovisual media, such as IPTV systems and streaming media;

– develop Recommendations and guidelines to improve accessibility of services using new emerging technologies such as artificial intelligence and metaverse;

– assist in the development of guidelines for procurement of accessible systems, services and devices;

– develop specification in support of total conversation for disabilities beyond the needs of the deaf;

– develop guidance for implementers of relay systems for deaf, hard of hearing and speech-impaired users;

– maintain the list of suitable accessibility terms and definitions;

– develop participation taxonomy of use cases for accessible audiovisual media in content delivery systems;

– develop roadmaps for audiovisual accessibility for content delivery in both developed and developing countries.

– create guidelines for the design of IP terminal devices and IP communication systems for the inclusion of accessibility features including text conversation, video and alerting, and maintain interoperability with legacy text telephones;

– coordination with other ITU-R, ITU-T and ITU-D study groups for fulfilment of accessibility requirements in their Recommendations;

– coordination with other SDOs for fulfilment of accessibility requirements in their specifications;

– coordinate with ITU IRG-AVA and ISO/IEC JTC1 SC35, taking into account relevant metaverse deliverables allocated to SGC;

– continue to support the collaboration with ISO/IEC JTC1/SC 35 on standards for ICT accessibility;

– promotion of total conversation defined in ITU-T F.703 as a mainstream service;

– promotion of the concept of universal design, as defined in the UNCRPD;

– promotion of SDGs;

– maintain the documents under the responsibility of the Question (including ITU-T F.790-series, V.18; FSTP-TACL, FSTP-AM, FSTP-ACC-RemPart, FSTP-ACC-UC);

– modification and/or extension of existing deliverables under ITU-T Study Group C responsibility to enable accessible systems (including ITU-T F.703 and H.702).

An up-to-date status of work under this Question is found in the SGC work programme (https://itu.int/ITU-T/workprog/wp\_search.aspx?sp=18&q=[Acc/C]).

4 Relationships

Recommendations

– ITU-T F.700, G.722, G.722.2, G.729, G.769/Y.1242, G.799.1/Y.1451.1, H.300-series, H.248, H.264, H.265, H.17, H.700-series, V.150-series, T.140, Y.1901

Questions

– All Questions of Study Group C

Study groups

– ITU-T SG12 on media quality

– ITU-T SG13 on future networks

– ITU-T SG15 on access networks, for inclusive design in communication services

– ITU-T SG17 on privacy, security and child online protection

– ITU-T SG20 on IoT and smart cities & communities

– ITU-R WP5A, SG6

– ITU-D SG1 on enabling inclusive communication, especially for persons with disabilities

– ITU-D SG2 on digital transformation and enabling technologies for e-services and applications, including e-health and e-education

Other ITU bodies

– ITU-T JCA-AHF

– ITU-D special initiatives

Other bodies

– ITU IRG-AVA

– IETF in general, and specifically the MMUSIC, WebRTC and AVT groups

– 3GPP and 3GPP2 for mobile accessibility inclusion and co-ordination of text telephony and total conversation related issues

– ETSI, particularly TC HF (Human Factors)

– ISO/IEC JTC1/SC 35 on accessibility and user interfaces

– ISO/TC 159/SC 4 on accessibility (TBC)

– IEC TC100 on assisted living

– W3C on Web accessibility

– G3ict (Global Initiative for Inclusive ICTs)

– Internet Governance Forum

– WHO, WIPO and other United Nations specialized agencies

– Regional organizations such as the Asia Pacific Telecommunity, European Accessibility Resource Centre, AccesibleEU, Zero Project

– Disability organizations including the World Federation of the Deaf (WFD), World Blind Union (WBU), International Federation of Hard of Hearing People (IFHOH) and Disabled People's International (DPI)

WSIS Action Lines:

– C2, C3, C5, C6, C9, C11

Sustainable Development Goals:

– 9

ANNEX 3
(Document WTSA-24/24)

ITU-T action plan for a vibrant engagement of the industry

#### 1 Introduction

As a starting point, this document considers the following items of the Terms of Reference (ToR) of RG-IEM as per section D.7 of Annex D of the (Draft) Report of the first TSAG meeting (Geneva, 12-16 December 2022) contained in [TSAG-TD004R1](https://itu.int/md/T22-TSAG-221212-TD-GEN-0004/en):

– *To consider the issue of industry engagement discussed at WTSA-20, including Resolution 68 (Rev. Hammamet, 2016) or draft revised Resolution 68. (WTSA-20 Action 10).*

– *To perform a review of the CxO/CTO coordination process.*

– *Develop a plan to attract intensive industry participation in order to take account of latest technical trends and market needs.*

This action plan was developed in the purview of the above mandate and is the result of contribution driven and collaborative work during the course of TSAG, WP-IEM, RG-IEM and Ad-Hoc drafting group meetings. This action plan includes the results of the report [TSAG TD599](https://itu.int/md/meetingdoc.asp?lang=en&parent=T22-TSAG-240729-TD-GEN-0599) of the Workshop on Industry Engagement as discussed in the following RG-IEM meetings.

See Annex A of this action plan for detailed list of contributions and documents that sustained this effort.

#### 2 Rationale

##### 2.1 The Strategic Plan of the ITU for 2024-2027

The ITU Strategic Plan [b-ITU Strategic Plan] is premised on a results-based methodology which includes several key components, one of which is entitled "Enablers" which allow the Union to deliver on its goals and priorities more effectively and efficiently. One such "Enabler" highlights the need for ITU to work as a membership-driven organization, which includes not only Member States, but also to "work to deepen its engagement with representatives of the telecommunication/ICT and other industry sectors, to demonstrate ITU's value proposition in the context of the strategic goals". (Annex 1 to Resolution 71 (Rev. Bucharest, 2022), ITU strategic plan for 2024-2027).

##### 2.2 Visualisation of the components of this document

For a more effective implementation, aligned with [b-ITU Strategic Plan] ITU Strategic Plan 20242027: Strategic framework, a result-based structure is introduced to manage the action plan for the engagement of the industry.



The measures or actions can be categorized into four pillars:

– Raising awareness, refers to action plan AP1.1 and AP5.

– Adding value, refers to action plan AP1.2, AP1.3, and AP1.6.

– Attracting potential new sector members, refers to action plan AP1.4.

– Mapping of ITU strategic plan and indicators, refers to action plan AP1.5, AP1.7, AP3, and AP4.

These non-exhaustive and non-exclusive pillars will form the main elements in RG-IEM's deliverable(s), then for implementation and assessment.

##### 2.3 Methodology for the analysis of the industry engagement action plan

###### 2.3.1 Structure of Strategic Plan for the Union 2024-2027

For convenience, the principal components are extracted and listed as follows from the current [b‑ITU Strategic Plan] in section 2.3.1 of Annex 1, Resolution 71, Section 2.1 (Overall Framework) and can be leveraged for each action plan item description:

Table 3.1 - Definitions of the Principal components of strategic plan

| Components of strategic plan | Definition |
| --- | --- |
| Vision  | The better world ITU wants to see. |
| Mission | Main overall purposes of the Union, as per the basic instruments of ITU. |
| Strategic goals | The Union's high-level goals which enable the realization of its mission. |
| Targets | The desired results the Union aims to achieve in order to deliver on its strategic goals, the 2030 Agenda for Sustainable Development and the World Summit on the Information Society action lines. |
| Thematic Priorities | Areas of work that the Union focuses on and in which outcomes will be achieved to meet the strategic goals. |
| Outcomes | Key results the Union aims to achieve under its thematic priorities. |
| Product and service offerings | The range of ITU's products and services that are deployed to support the Union's work under its thematic priorities. |
| Enablers | Ways of working that allow the Union to deliver on its goals and priorities more effectively and efficiently. |
| Operational plans and Sector priorities | The operational plan is prepared on a yearly basis by each Bureau, in consultation with the relevant advisory group, and by the General Secretariat, in accordance with the strategic and financial plans. It contains the detailed plan for the subsequent year and a forecast for the following three-year period for each Sector and the General Secretariat. The Council reviews and approves the four-year rolling operational plans. |

###### 2.3.2 Analysis of the industry engagement action plan with the Framework of the Strategic Plan

For purposes of the analysis of the industry engagement action plan, the overall **"Strategic Goal**" is to identify and consider a full range of measures to advance and strengthen the engagement between industry and Member States in the fulfilment of the purposes of the Union and goals of the Strategic Plan from both developed and developing countries.

#### 3 Resolutions, articles from the Convention and Constitution encouraging industry engagement

For purposes of the analysis of the elements of the Action Plan, the focus of industry engagement spans through:

– recognized operating agencies and scientific or industrial organizations should be included,

– associates and SMEs should be included as sub-sets of these categories in such an analysis,

– vertical ecosystems are recognized as missing in ITU-T with a willingness to include a focus on them,

– other entities could be considered to be included as appropriate,

– both developed and developing countries are in the focus of this action plan.

##### 3.1 Entities to be included as the focus of the industry engagement action plan

Article 19 of the ITU Convention (Participation of Entities and Organizations Other than Administrations in the Union's Activities) identifies which entities and organization the Secretary-General and the Directors of the Bureaux have targeted for enhanced participation, including recognized operating agencies (ROAs) and scientific or industrial organizations (SIOs)[[1]](#footnote-1) (CV No. 229 a)).

For purposes of the Action Plan, these are the entities which represent the focus of the analysis of its various components, as identified at the first meeting of TSAG in the 2022-2024 study period. These entities in turn are included in the definition of Sector Member.

Also included in this definition are those entities identified as "Associates"[[2]](#footnote-2) (see WTSA Resolution 31, (Rev. Dubai, 2012), Admission of entities and organizations to participate as Associates in the work of ITU-T) and SMEs (see PP Resolution 209, (Dubai, 2018[[3]](#footnote-3)), Encouraging small and medium enterprises in the work of the Union).

#### 4 Industry engagement action plan

AP1 – The industry engagement action plan is premised on the need to identify and consider a full range of measures to advance and strengthen the engagement between industry and Member States in the fulfilment of the purposes of the Union and goals of the Strategic Plan from both developed and developing countries, including the following:

AP1.1 – Identify if there is a problem of lack of awareness of standardisation, and lack of awareness of the ITU-T in particular, including, but not limited to:

AP1.1.1 – Correlate the lack of awareness with the lack of engagement in standards,

AP1.1.2 – Identify the roles and drivers involved, and the ways and means to increase the engagement, e.g. by identifying new and improving existing metrics,

AP1.1.3 – Identify if there is a lack of courses in standardization for industry leaders (MBAs, etc.) contributing to a lack of leadership culture on standardization which in some areas, doesn't provide conditions for standardization teams to develop and blossom

AP1.2 – Identify how ITU-T can achieve a common vision of the future as a partnership between Member States and industry in order to preserve and strengthen its international credibility by more clearly defining the respective roles of such partnership;

AP1.3 – Identify value propositions to enhance participation and retention of industry as Sector Members and Associates (including SMEs) in ITU-T;

AP1.4 – Identify how to attract industry from developed and developing countries to participate in ITU-T as new Sector Members, Associates and SMEs, particularly the next generation and be inclusive.

AP1.5 – Identify how to bridge the gap between technology, policy, and strategy in standardization;

AP1.6 – Identify how ITU-T Sector Members and Associates (including SMEs) can contribute to a dialogue leading to an enabling environment that adds value and enhances quality;

AP1.7 – Motivate coordination of standardization activities by ITU-T Sector Members and Associates (including SMEs) that are participating in other standards development organizations.

AP2 – The industry engagement action plan developed by TSAG should also consider implementation strategies for achieving the above through the organization of regular workshops and surveys with the industry to receive feedback on how to enhance participation in the ITU-T.

AP3 – These actions would be complementary to the current activities being undertaken as part of the CTO/CxO process as outlined in (Resolution 68, Rev. Hammamet, 2016), although part of the Action Plan would be focused on determining whether the original objectives of Resolution 68 have been achieved. Based on the assessment, perform a review of the CTO/CxO process as needed.

AP4 – Format the action plan on the basis of the results-based structure of the ITU Strategic Plan, including key outcomes and key outcome indicators.

AP5 – Send out a circular informing membership about the ongoing discussion in TSAG to encourage industry engagement, e.g., based on the text in TSAG-C15R1.

AP6 – Because there are interdependencies between Rapporteur Groups, discoveries and progress made in this Action Plan may be relevant with other TSAG Rapporteur Groups, so coordination with RG-IEM should ensure coherency.

In order to facilitate the implementation of the Action Plan, it is suggested that certain elements of the Plan be addressed before others. This action would be subject to an ongoing assessment as the work of RG-IEM continues.

#### 5 ITU-T service offerings

To achieve the outcomes under aforementioned pillars, the services offered by ITU-T could be introduced. The range of services can be found in section 2.7 of Resolution 71 of Plenipotentiary Conference 2022[[4]](#footnote-4). Each Sector and the Secretariat General will provide more detailed information on how they will deploy these services, and relevant items can be selected to add into the industry engagement action plan:

– Development of ITU-T standards and other deliverables

– Development of policy frameworks and knowledge products

– Provision of data and statistics

– Capacity development

– Provision of technical assistance

– Convening platforms

– Organisation of workshops

– Organisation of surveys

#### 6 Enablers/Measures to be taken by ITU-T to encourage industry engagement

The term "enabler" has been used to highlight the need for ITU to work as a membership-driven organization, which includes not only Member States, but also to "work to deepen its engagement with representatives of the telecommunication/ICT and other industry sectors, to demonstrate ITU's value proposition in the context of the "Strategic Goals"". (See Annex 1 to Resolution 71 (Rev. Bucharest, 2022), Section 2 ([b-ITU Strategic Plan] Strategic framework for 2024-2027), Section 2.8 Enablers):

"2.8 Enablers

64 Enablers are ITU's ways of working that allow it to deliver on its goals and priorities more effectively and efficiently. They reflect the Union's values of efficiency, transparency and accountability, openness, universality and neutrality, and being people-centred, service-oriented and results-based, and leverage its key strengths and address its weaknesses so that it can support its membership.

Membership-driven

65 ITU will continue to work as a membership-driven organization, to effectively support and reflect the needs of its diverse members. ITU recognizes the needs of all countries, in particular those of developing countries, including LDCs, SIDS, LLDCs and countries with economies in transition, as well as underserved and vulnerable populations, which should be prioritized and given due attention. ITU will also work to deepen its engagement with representatives of the telecommunication/ICT and other industry sectors, to demonstrate ITU's value proposition in the context of the strategic goals."

Additional enablers that facilitate the implementation of the action plan include the following non-exhaustive list of potential enablers:

– Measures for satisfaction and confidence building

– Engagement of Vertical Ecosystems (FSI, Automotive, etc.)

– Next generations orientation

– Identifying potential New Sector/Associate Members of ITU-T through Member States

#### 7 Action plan measurement and implementation considerations

In order to ensure successful implementation, it is proposed that the results-based methodology of the ITU Strategic Plan concerning Key Outcomes and Key Outcome Indicators be used to provide a framework for actions associated with the enhancement of industry engagement in ITU-T.

It is further proposed that the elaboration of these Outcomes be identified as an integral part of the work of RG-IEM;

Indeed, another important term is the "Outcomes" component, defined as "key results the Union aims to achieve under its thematic priorities". Thematic priorities are essentially "Objectives", a term used in earlier versions of the Strategic Plan. Moreover, associated with such Objectives were "Expected Results and Measurements" in the form of Outcomes and "Key Outcome Indicators". For purposes of this analysis of the industry engagement action plan, an additional category could include "Implementation Strategies".

Tags legend in Tables 3.2 to 3.13:

IWX-xx A tag pointing on the "points for consideration" of the table in chapter 8 below.

Table 3.2 – Action Plan item on "Lack of awareness"

|  |  |  |  |
| --- | --- | --- | --- |
| **AP#** | AP1.1, AP1.1.1 – AP1.1.3 | **AP Short Name** | "Lack of awareness" |
| **Objective/Thematic Priority** |
| Identify if there is a problem of lack of awareness of standardisation, and lack of awareness of the ITU-T in particular, including, but not limited to:- Correlate the lack of awareness with the lack of engagement in standards,- Identify the roles and drivers involved, and the ways and means to increase the engagement,- Identify if there is a lack of courses in standardization for industry leaders (MBAs, etc.). |
| **Key Outcome(s)** |
| Increased awareness of the importance, including among the next generation of engineers and others in related fields, of ITU-T global standards in the development of telecom/ICT systems and services. |
| **Key Outcome Indicator(s)** |
| - Enhanced participation (statistics related to next generation engineers can be specifically counted) in the work of ITU-T study groups.- Satisfaction and confidence building.- More recommendations that prove valuable to the industry (implemented in products, used in relevant regulations for specific markets, …). |
| **Implementation Strategies** |
| Included among such strategies would be mechanisms such as workshops, surveys, etc. to determine awareness of ITU-T's "Product and service offerings".Taking into account PP Resolution 123 (PP, Bucharest 2022), the Programme 1 and 3 of the Annex of Resolution 44 (WTSA, Geneva 2022) could be considered as input to the implementation strategies. As well, the Recognizing c).In particular the capacity building aspects could benefit with reaching out to general leadership education sector and assess the assumption that in some part of the world standardisation is not part of business leaders curricula and discuss protentional short, mid and long term remediations. Particular focus should be considered for the next generations (during higher education stage). |
| **Enablers** |
|  |
| **ITU Services** |
| Collection of best practices from ITU-T memberships.  |
| **Learning and Feedback** |
| The 1st IEW provided the following feedback related to "Lack of awareness": There is little awareness of the products and value of ITU-T, so industry is drawn to other venues that have competence. Development of an "ITU-T story", coupled with marketing and promotion of what ITU-T has can change this. From non-members, we heard that there is a lack of awareness -- not of standardization but of ITU-T. Even members have indicated that we do not promote or market the success of ITU-T standardization enough. In ITU-T management positions and editors are publicly identified. However, contributors are not, leading to the impossibility for their management line / stakeholders to have any form of KPI and therefore, the only roles that can be rewarded are publicly listed roles, such as editors. This implies that there is no measurement for contributions, except for New Work Items |
| **Proposed Actions** |
| **For AP1.1.2**IWX-09 - Investigate the best ways to improve the quantitative metrics to complete existing ones and qualitative onesIWX-14 - Organise an ad-hoc session to approach the pros and cons of incentivisation and how better conditions could lead to better behaviour and better outcome.-.IWX-16 - Assess, measure and explore ways to improve/develop the success factors as ITU-T impact to support its value propositions**For AP1.1.3**IWX-06 - Investigate the problem that New work items established as Technical Reports, or Guidelines should be better recognized in the context of the standardization process (A.1 and A.13)IWX-24 for AP1.1.3 - Investigate the assumption that writing code and writing standards is very close and at the same time highlight the differences. With the objective to put both software developers and standards developers on an equal footing.IWX-25 – for AP1.1.3 - Investigate how to best support current industry members to develop their own internal 'promoters' or 'translators' and collect best practices in conjunction with 'train the trainer' approaches. How to change the perception in some corporate environments and how to regroup a proper training program |

Table 3.3 - Action plan on "Common vision and roles"

|  |  |  |  |
| --- | --- | --- | --- |
| **AP#** | AP1.2 | **AP Short Name** | "Common vision and roles" |
| **Objective/Thematic Priority** |
| Identify how ITU-T can achieve a common vision of the future as a partnership between Member States and industry in order to preserve and strengthen its international credibility by more clearly defining the respective roles of such partnership; |
| **Key Outcome(s)** |
| - The ITU-T is equipped with a clearly spellable common vision of the future as a 'story'.- The roles of the partnership are clearly defined.- Identify the nature and options for countering an unfortunate or inadvertent perception that in some cases there is a conflict between Member States and industry participants. |
| **Key Outcome Indicator(s)** |
| - An agreed story.- A clearly described role for the ITU-T and the industry.- A frictionless collaboration environment. |
| **Implementation Strategies** |
| - The ITU Strategic Plan itself contains vision and roles.- This is a leadership act and executive consultancy best practices and methods would bring valuable input.- Encourage the ITU-T leadership (TSB and membership) to identify and reiterate the commonality of interest between Member States and industry and identify amelioration options for minimizing any future conflicts, real or perceived. |
| **Enablers** |
|  |
| **ITU Services** |
|  |
| **Learning and Feedback** |
| The 1st IEW provided the following feedback related to "Common vision and roles": TSB Director shared:o The value of standardization is derived from the implementation and wide spread of standards.o Industry plays a crucial role in the implementation of standards.o Standardization is a powerful tool for business to succeed in the market.o Standardization is a powerful tool for creating a world that meets one's demands at an affordable price. Evolution towards digitalisation, intelligence, green. Proposal of ITU-T Private partnership, flexible participation models, evolve towards agile standards. ITU-T is the only E2E standard organisation for operator's market. Work items should be based on requirements from identified customers (i.e., operators). |
| **Proposed Actions** |
| IWX-05 - Research the best ways to increase the value of the outcomes of the ITU-T by ensuring the right conditions on the inputs as New Work Items in particular optimising global applicability vs requirements for regional diversity |

Table 3.4 - Action plan on "Value propositions"

|  |  |  |  |
| --- | --- | --- | --- |
| **AP#** | AP1.3 | **AP Short Name** | "Value propositions" |
| **Objective/Thematic Priority** |
| Identify the value propositions to enhance participation and retention of industry as Sector Members, and Associates (including SMEs) in ITU-T. |
| **Key Outcome(s)** |
| Identified list of value propositions to enhance value in the work of ITU-T. |
| **Key Outcome Indicator(s)** |
| - the retention of industry representatives in the activities of ITU-T,- an increase in participation in the work of the SGs, FGs, JCAs, etc.,- an increase in the number of contributions submitted to such meetings. |
| **Implementation Strategies** |
| - determination through surveys to membership or other such means that the value of participation in ITU-T is increasing;undertaking a statistical analysis of the number of industry representatives among Sector Members, Associates and SMEs that are participating and contributing to the work. |
| **Enablers** |
|  |
| **ITU Services** |
|  |
| **Learning and Feedback** |
| The 1st IEW provided the following feedback related to "Value propositions": The value proposition of ITU-T should be to safeguard global alignments of the different standards organisations. ITU-T benefits from a world-leading process based on consensus, balanced IPR policy, inclusivity, and is a unique industry-government bridge, and should focus on cooperation and coordination with existing industry recognized centres of competence. ITU-T little relevance for enterprise market, GitHub and open source implementations are the new world. ITU-T is the place to interact with policy makers. Some were of the view that ITU-T should be reinvented. A clearer statement of the ITU-T value proposition should be promoted by means of, for example, the ITU-T Homepage and the ITU-T portion of the Strategic Plan. |
| **Proposed Actions** |
| IWX-03 - Improve clarity for where industry can identify solutions and engageIWX-07 - Investigate the best ways to deliver an "ITU-T story" / value proposition and promote what ITU-T hasIWX-08 - Investigate if it is realistic to have one "ITU-T story" / value proposition or if we need multiple ones by different contexts (Study Group, themes, audiences, etc.)IWX-26 - Investigate ways to decrease the financial bar of entry for SMEs and startups to join the ITU as sector members |

Table 3.5 - Action plan on "Attract industry"

|  |  |  |  |
| --- | --- | --- | --- |
| **AP#** | AP1.4 | **AP Short Name** | "Attract industry" |
| **Objective/Thematic Priority** |
| Identify how to attract industry from developed and developing countries to participate in ITU-T as new Sector Members, Associates and SMEs; |
| **Key Outcome(s)** |
| Identification of measures to address the following non-exhaustive list of issues: disparity in human resources skilled in standardization and disparity in effective participation in ITU-T activities; access to essential technical information in order to enhance knowledge and capacity i) to implement global standards, ii) to contribute effectively to the work of ITU-T, iii) to include their own specificities and necessities in the global standards-making process, and iv) to influence global standards-making discussions by having active roles in the ITU-T SGs, in close collaboration with other BDT capacity-building initiatives; compiling and maintaining an up-to-date database with information on new standardized technologies, as well as products that are compliant with ITU-T Recommendations.An important consideration to bear in mind is the new BSG program is to address the disparities in developing countries in particular in terms of developing and implementing international standards through ITU-T Recommendations. (Can also be noted and expanded in section AP1.5). |
| **Key Outcome Indicator(s)**  |
| a more active engagement of industry from developed and developing countries in partnership with Member States. |
| **Implementation Strategies** |
| identify strategies based in the implementation of the bridging the standardization gap programme as well as the relevant provisions of the Kigali Action Plan; seek advice and recommendations from the Industry Advisory Panel active within the GSR process.NOTE: In accordance with Resolution 74 (WTSA, Geneva 2022), Sector Members from developing countries shall not be affiliated in any way to any Sector Member of a developed country. Moreover, the participation of operators shall be limited to those having an income per capita according to the United Nations Development Programme not exceeding a threshold to be determined.Note: In developed countries, leaders of the industry who have received an appropriate awareness and recognize the need to engage will support the engagement as leaders with the right budget, the right assignations and career support for current and new generation. |
| **Enablers** |
|  |
| **ITU Services** |
|  |
| **Learning and Feedback** |
| The 1st IEW provided the following feedback related to "Attract industry": ITU-T has a stable, mature and predictable process for producing international standards – at least for the telecom ecosystem. However, this can be too slow and misaligned with new agile methodologies beyond software applications, and this can be a hurdle in attracting the next generation. One potential option is to institute a change in the way the ITU-T builds standards. Providing an international view but an agile software-style culture that would attract the subject matter experts and industries back to the ITU-T. Speed and agility in the process is lacking, but there are efforts underway to bring in Industry friendly working methods. |
| **Proposed Actions** |
| IWX-01 - Investigate new methodologies, e.g. agile methodologies and assess if they can be a success factor for attracting next generation and improve efficienciesIWX-04a) - (CSP-market restricted) Research the best ways to refocus work items on customer requirementsIWX-04b) - Research the best ways to attract CSP-market relevant product management roles to participate in the work of the ITU-TIWX-06 - Investigate the problem that New work items established as Technical Reports, or Guidelines should be better recognized in the context of the standardization process (A.1 and A.13)IWX-21a) - Which tools can support and improve collaboration, development of deliverables.IWX-21b) - Invite potential product candidate vendors to present their solutions to ITU-T.IWX-27 - Investigate the best way to promote ITU-T to underserved segments (hyperscalers, software, IoT, etc.) |

Table 3.6 - Action plan on "Bridge the technology/policy/strategy gap"

|  |  |  |  |
| --- | --- | --- | --- |
| **AP#** | AP1.5 | **AP Short Name** | "Bridge the technology/policy/strategy gap" |
| **Objective/Thematic Priority** |
| Identify how to bridge and gap between technology, policy and strategy in standardization. |
| **Key Outcome(s)** |
| The identification of measures in the form of guidelines across the whole lifecycle of standardisation from the members competencies in the three fields, the initiation of new work item, their development, their quality, and the application of ITU-T Recommendations particular on manufactured products and interconnection, with emphasis on Recommendations having regulatory and policy implications. |
| **Key Outcome Indicator(s)** |
| - Number of relevant and implementable measures categorised by short, medium and long term execution and impact.- Measures are relevant against a to-be-developed list of the concerns to bridge the gap between technology, policy and strategy. |
| **Implementation Strategies** |
| - the development of competency training courses on standardization taking into account the specific. relationships and dynamics between technology, policy and strategy for both developed and developing countries.- the consultation with both BDT and TSB on their experience and relationships outside of the ITU. |
| **Enablers** |
|  |
| **ITU Services** |
|  |
| **Learning and Feedback** |
| The 1st IEW provided the following feedback related to "Bridge the technology/policy/strategy gap": ITU-T has an excellent relationship with members states. However, subject matter experts and competence are being drawn into partnerships and forums that are often dedicated to a focused solution. There are various operating models within ITU-T for producing international standards. However, without a requirement for regional diversity or some identification of global applicability, it is often too easy to start new work. The bridge between technology, policy, and strategy was noted as a strength for ITU, and that ITU-T needs to identify topics where this would be the most value. Like defining data transfer between countries. |
| **Proposed Actions** |
| IWX-11 - Investigate the best way for ITU-T to identify topics that maximise its strength as a bridge between technology, policy and strategyIWX-28 - Investigate the best ways to clearly define the role of ITU-T in AI |

Table 3.7 - Action plan on "Dialogue"

|  |  |  |  |
| --- | --- | --- | --- |
| **AP#** | AP1.6 | **AP Short Name** | "Dialogue" |
| **Objective/Thematic Priority** |
| Identify how ITU-T Sector Members, Associates and SMEs can contribute to a dialogue leading to an enabling environment that adds value and enhances quality.  |
| **Key Outcome(s)** |
|  |
| **Key Outcome Indicator(s)** |
|  |
| **Implementation Strategies** |
|  |
| **Enablers** |
|  |
| **ITU Services** |
|  |
| **Learning and Feedback** |
| The 1st IEW provided the following feedback related to "Dialogue": Collaboration with subject matter experts across the ecosystem is key for implementable international standards. The traditional standards bodies are losing subject matter experts to the other bodies, which is leading to inefficiency and regionalization instead of international standards. |
| **Proposed Actions** |
|  |

Table 3.8 - Action on plan on "Motivate coordination"

|  |  |  |  |
| --- | --- | --- | --- |
| **AP#** | AP1.7 | **AP Short Name** | "Motivate coordination" |
| **Objective/Thematic Priority** |
| Motivate coordination of standardization activities by ITU-T Sector Members and Associates (including SMEs) that are participating in other standards development organizations. |
| **Key Outcome(s)** |
| Given the rapid pace of change in the global standardization ecosystem, coordinated actions in the development of standards can lead to the avoidance of duplication of work, better harmonised collaboration and standards, and better qualification of opportunities for standardisation. |
| **Key Outcome Indicator(s)** |
| A more informed appreciation and understanding among Sector Members, Associates and SMEs who participate in other standards forums on the role of ITU-T in global standardization ecosystem. |
| **Implementation Strategies** |
| This element could be inserted in the agenda of a workshop to foster discussion on how to achieve this action plan item; otherwise, the information that is sought could be made available through surveys and questionnaires.Resolution 209 (PP, 2022) can be considered as input to this implementation strategies. |
| **Enablers** |
|  |
| **ITU Services** |
|  |
| **Learning and Feedback** |
| The 1st IEW provided the following feedback related to "Motivate coordination": More/better coordination with other SDOs and open source was suggested to avoid duplication and so that ITU can be the coordinator to benefit industry. ITU should coordinate and leverage technical work in other specialized forums, maintain and improve the technical excellence acquired in some domains and address issues in domains with limited success, and improve decision process and metrics to assess efficiency. |
| **Proposed Actions** |
| IWX-02 - Investigate how to better coordinate with other forums in order to ensure a good experience for experts and that expertise at ITU-T is kept stillIWX-10a) - Investigate the ways to improve coordination with other SDOs and opensource communities to avoid duplicationIWX-10b) - and so that ITU can be the coordinator to benefit industryIWX-19 - Reflect the differences in the value proposition and in the communication of ITU-T in terms of the role of ITU-T and coordinationIWX-29 - Investigate what is more attractive in opensource or in specific forums of other SDOs including on a breakdown per topics (cybersecurity, cloud, etc.), e.g. why experts go to certain forum vs others and why |

Table 3.9 - Action plan on "Workshop and surveys"

|  |  |  |  |
| --- | --- | --- | --- |
| **AP#** | AP2 | **AP Short Name** | "Workshop and surveys" |
| **Objective/Thematic Priority** |
| The Action Plan developed by TSAG should also consider implementation strategies for achieving the above through the organization of regular workshops and surveys with the industry to receive feedback on how to enhance participation in the ITU-T. |
| **Key Outcome(s)** |
| - Tangible feedback is formalised and qualified and inputs to several other action plan items.- The industry's awareness and its interest for standardisation increased significantly and sustainably.- The quality feedback received by ITU-T is an essential element to improve the attractiveness of ITU-T. |
| **Key Outcome Indicator(s)** |
| - Active and engaged number of participants in standardisation increases.- Number of contributions in standardisation increased.- Number of Recommendations cited (through regulatory harmonisation, through RFx business processes, etc.) increased. |
| **Implementation Strategies** |
| - Consult with TSB Director and other ITU leaders.- Review existing such engagement with industry such as the D sector IAP.- Review past such engagement with industry such as the Martigny meeting.- Focus on the needs of CxOs and what impacts CEOs.- Leverage the results from AP1.2 as the basis of what could attract CxOs into a workshop.- Review Resolution 68 (WTSA, Geneva 2022).- Review positioning of Workshops in the context of ITU as a whole.- Establish a good 'story', 'venue', 'timing', 'key outcome indicator'.- Establish an Industry Engagement Wokshop Steering Committee and a ToR.- Leverage this action plan as a whole.- Consider budgetary aspects. |
| **Enablers** |
| All the enablers listed and in particular the next generation one. |
| **ITU Services** |
| The service responsible to organize workshops. |
| **Learning and Feedback** |
| The 1st IEW is an example of soliciting feedback in the form of a workshop. The workshop was a full day, including keynotes by ITU-T and industry luminaries, four sessions including: 1) Industry Engagement, 2) Metrics, 3) Value Proposition, and 4) Standardization Process, and closing with a wrap-up session with the conference organizers. The outcomes/feedback from the 1st workshop provide insight into the action points found in the draft action plan.The workshop concluded the need to continue the industry engagement workshop series, potentially in coordination with the CxO or GSS meetings. |
| **Proposed Actions** |
|  |

Table 3.10 - Action plan on "Res. 68"

|  |  |  |  |
| --- | --- | --- | --- |
| **AP#** | AP3 | **AP Short Name** | "Res. 68" |
| **Objective/Thematic Priority** |
| These actions would be complementary to the current activities being undertaken as part of the CTO/CxO process as outlined in (Resolution 68, Rev. Hammamet, 2016), although part of the Action Plan would be focused on determining whether the original objectives of Resolution 68 have been achieved. Based on the assessment, perform a review of the CTO/CxO process as needed. |
| **Key Outcome(s)** |
| Clarification of the evolving role of industry in the development of ITU-T programmes and standards.Determination of whether the objectives of the CTO consultation process have been achieved as per WTSA Resolution 68.Reformulation of objectives for executive level industry consultation for the mutual benefit of industry, TSB and the ITU-T membership. |
| **Key Outcome Indicator(s)** |
| A more executive level, consistent and sustainable engagement on the part of industry executives with the work and outcomes of ITU-T standardization activities. |
| **Implementation Strategies** |
| Determine a set of options e.g. through surveys and workshops, on how to optimize consultations between the TSB and senior industry leaders. |
| **Enablers** |
|  |
| **ITU Services** |
|  |
| **Learning and Feedback** |
| The 1st IEW provided the following feedback related to "Res. 68": The assessment of the value of industry engagement and our efforts to improve the value for industry is complementary CTO/CxO process. There was support for the process, but more industry input to the discussion on the new work item bar in TSAG should be reflected. And as a result, it would be appropriate to reflect this at WTSA in perhaps a new resolution or a modified Resolution 68. |
| **Proposed Actions** |
| IWX-12 - In conjunction with IWX-04 and IWX-05, a new Resolution or modifications to Resolution 68 should reflect that the engagement to improve the value for the industry is complementary to the CTO/CxO meetings but more industry input to the discussion on the new work item bar in TSAG should be reflected |

Table 3.11 – Action plan on "Format on ITU Strategic Plan"

|  |  |  |  |
| --- | --- | --- | --- |
| **AP#** | AP4 | **AP Short Name** | "Format on ITU Strategic Plan" |
| **Objective/Thematic Priority** |
| Format the action plan on the basis of the results-based structure of the ITU Strategic Plan, including key outcomes and key outcome indicators. |
| **Key Outcome(s)** |
| A good support of this action plan as its format is aligned on the ITU Strategic Plan [b-ITU Strategic Plan]. |
| **Key Outcome Indicator(s)** |
| - The action plan is clear and agreed.- Each action plan item is executed with sufficient members to support it.- Each action plan item is executed successfully. |
| **Implementation Strategies** |
| - Stick to the maximum to the terminology, concepts and diagrammatic of the ITU Strategic Plan [b-ITU Strategic Plan].Note: this is what this action plan is about. |
| **Enablers** |
|  |
| **ITU Services** |
|  |
| **Learning and Feedback** |
| The 1st IEW provided the following feedback related to "Format on ITU Strategic Plan": No specific feedback, however, the outcomes and feedback from the 1st workshop indicate a desire to communicate the action plan, leveraging key outcomes and key outcome indicators Note: the optimum format for the elaboration of the draft Strategic Plan, 2028-2031 as it applies to ITU-T is currently being considered in RG-SOP. |
| **Proposed Actions** |
|  |

Table 3.12 - Action plan on "Circular"

|  |  |  |  |
| --- | --- | --- | --- |
| **AP#** | AP5 | **AP Short Name** | "Circular" |
| **Objective/Thematic Priority** |
| Send out a circular informing membership about the ongoing discussion in TSAG to encourage industry engagement, e.g., based on the text in TSAG-C15R1.  |
| **Key Outcome(s)** |
| One circular informing the Regional groups that TSAG have started to discuss various measures to encourage industry engagement,And at least one circular with status update of the discussion in TSAG. |
| **Key Outcome Indicator(s)** |
| Feedback received from regional groups and current and especially new industry members. |
| **Implementation Strategies** |
| Call for contributions on circulars.At least 2 circulars with contents described above. |
| **Enablers** |
|  |
| **ITU Services** |
| TSB Circular procedures. |
| **Learning and Feedback** |
| The 1st IEW provided the following feedback related to "Circular": No specific feedback, but communication is key. Further workshops providing an opportunity for engagement is key to ensuring the relevance of the ITU-T in the ecosystem as technologies for pervasive and continuous connectivity evolve. |
| **Proposed Actions** |
|  |

Table 3.13 - Action plan on "Coordination with other RGs"

|  |  |  |  |
| --- | --- | --- | --- |
| **AP#** | AP6 | **AP Short Name** | "Coordination with other RGs" |
| **Objective/Thematic Priority** |
| Because there are interdependencies between Rapporteur Groups, discoveries and progress made in this Action Plan may be relevant with the other TSAG Rapporteur Groups, so coordination with RG-IEM should ensure coherency. |
| **Key Outcome(s)** |
|  |
| **Key Outcome Indicator(s)** |
|  |
| **Implementation Strategies** |
|  |
| **Enablers** |
|  |
| **ITU Services** |
|  |
| **Learning and Feedback** |
|  |
| **Proposed Actions** |
| IWX-16ii) - RG-SOP to take over from when the value proposition is agreed as it directly inputs for the ITU Strategic Plan exercise of 2026IWX-16iii) - Investigate with RG-WTSA if a WTSA Resolution could support this action by a more prescriptive resolve. |

#### 8 Identification of potential actions and considerations

Table 3.14 below:

– identifies the point of considerations extracted from the various sessions of the Industry Engagement Workshop or from its report,

– translates each point of consideration into one or more proposed action(s),

– identifies how and where to amend the target document and in particular the currently approved Industry Engagement Action Plan in [TSAG-TD256](https://itu.int/md/T22-TSAG-230530-TD-GEN-0256/en).

Table's legend

In "Session Source" column:

– K Industry Engagement Workshop Keynotes session

– 1 Industry Engagement Workshop session 1

– 2 Industry Engagement Workshop session 2

– 3 Industry Engagement Workshop session 3

– 4 Industry Engagement Workshop session 4

– E Industry Engagement Workshop ending session

– R Industry Engagement Workshop report

In "Target Entity" column:

– The "Target" column identifies the entity that the IEWSC could be considering to act on the proposed action

In "Target Document" column:

– this column identifies the document and where in the document should be amended by this proposed action

– the 'tag' of the form APx.yy refers to an Action Point identifier in clause 4 of the Industry Engagement Action Plan in [TSAG-TD256](https://itu.int/md/T22-TSAG-230530-TD-GEN-0256/en)

Table 3.14 – Potential actions and considerations

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **#** | **Point for consideration** | **Session Source** | **Proposed Action** | **Target Entity** | **Target document** | **Comments** |
| **K** | **1** | **2** | **3** | **4** | **E** | **R** |
| 01 | ITU-T process can be too slow and misaligned with new agile methodologies beyond software applications, and this can be a hurdle in attracting next generation |  | x |  | x |  |  | x | Investigate new methodologies, e.g. agile methodologies and assess if they can be a success factor for attracting next generation and improve efficiencies | RG-IEM, RG-WM, TSB | AP1.4 | There are no mention of 'next generation' in any of the current Action Plan iteMs Proposal to amend the descriptor of AP1.4. |
| 02 | Subject matter experts and competence are being drawn in partnerships and forums that are often dedicated to a focused theme |  |  |  | x |  |  | x | Investigate how to better coordinate with other forums in order to ensure a good experience for experts and that expertise at ITU-T is kept still | RG-IEM, RG-SOP | AP1.7 |  |
| 03 | The end-to-end nature of ITU-T should be better leveraged to help industry identify solutions |  |  |  | x |  |  | x | Improve clarity for where industry can identify solutions and engage | RG-IEM, TSB | AP1.3 | 2nd level hesitation to add the proposed action in AP1.1 and/or AP1.4 |
| 04 | Work items should be based on customer requirements and ITU-T should provide a venue also for industry product management people to discuss these requirements |  | x |  |  |  |  | X | a) (CSP-market restricted) Research the best ways to refocus work items on customer requirementsb) Research the best ways to attract CSP-market relevant product management roles to participate in the work of the ITU-T | RG-IEM, RG-SOP, TSB | AP1.4 | Both points |
| 05 | It is often too easy to start new work items |  |  |  | x | x |  | x | Research the best ways to increase the value of the outcomes of the ITU-T by ensuring the right conditions on the inputs as New Work Items in particular optimising global applicability vs requirements for regional diversity | RG-IEM, RG-WM | AP1.2 or AP1.4 | AP1.2 because of 'its international credibility'AP1.4 because it is a condition to retain and even attract industry |
| 06 | New work items established as Technical Reports, or Guidelines should be better recognized in the context of the standardization process |  |  | x | x |  |  |  | Investigate the problem that New work items established as Technical Reports, or Guidelines should be better recognized in the context of the standardization process (A.1 and A.13) | RG-IEM | AP1.1.3, AP1.4 | Aligned to item 05 above this is an AP1.4 point but in addition it calls to the overall lack of 'education' o industry leaders on the remit and how to best participate to standardisation. |
| 07 | Development of an "ITU-T story" / value proposition, coupled with marketing and promotion of what ITU-T has |  |  |  | x |  |  | X | Investigate the best ways to deliver an "ITU-T story" / value proposition and promote what ITU-T has | RG-IEM, TSB | AP1.3 |  |
| 08 | Is it realistic to have only one "ITU-T story" / value proposition or shall we develop several ones by different contexts? |  |  |  | x |  |  |  | Investigate if it is realistic to have one "ITU-T story" / value proposition or if we need multiple ones by different contexts (Study Group, themes, audiences, etc.) | RG-IEM, RG-SOP, TSB | AP1.3 |  |
| 09 | Some quantitative metrics are missing and are needed vs existing quantitative metrics and qualitative metrics |  | x | x |  |  |  | x | Investigate the best ways to improve the quantitative metrics to complete existing ones and qualitative ones | RG-IEM | AP1.4 or AP1.1.2 | It seems that a key point of AP1.4 is to use tooling and metrics to attract industry and therefore these concepts should probably be elevated in the AP1.4 point as even here it tool some thinking to target AP1.4 as this is too implicit. See other items 14 and 15, a probably better alternative is to amend AP1.1.2 to cover metrics because of the word 'means' |
| 10 | More/better coordination with other SDOs and open source communities to avoid duplication and so that ITU can be the coordinator to benefit industry. |  |  |  | X |  |  | X | a) Investigate the ways to improve coordination with other SDOs and opensource communities to avoid duplicationb) and so that ITU can be the coordinator to benefit industry | RG-IEM | AP1.7 |  |
| 11 | ITU-T should identify topics where the bridge between technology, policy and strategy is a strength for ITU |  |  |  | x |  |  | x | Investigate the best way for ITU-T to identify topics that maximise its strength as a bridge between technology, policy and strategy | RG-IEM | AP1.5 |  |
| 12 | As part of the support to the CTO/CxO meeting, more industry input to the discussion on the new work item bar in TSAG should be reflected including in a new resolution or a modified Resolution 68[Should we keep this item?] |  |  |  |  |  |  | x | In conjunction with #04 and #05, a new Resolution or modifications to Resolution 68 should reflect that the engagement to improve the value for the industry is complementary to the CTO/CxO meetings but more industry input to the discussion on the new work item bar in TSAG should be reflected | RG-IEM, RG-WM | AP3 | This item requires a bit more clarity |
| 13 | Conduct a followup to this first Industry Engagement Workshop |  |  |  |  |  | x | X | TSAG to consider holding such a workshop again as a follow-up, or even regularly, either separate or joint with the CTO/CxO meetings | RG-IEM | AP2 |  |
| 14 | Some organizations incentivize their employees on the 'wrong' KPIs (e.g., number of contributions, number of new work items), which may lead to inefficient behaviour  |  |  |  | X |  |  |  | Organise an ad-hoc session to approach the pros and cons of incentivisation and how better conditions could lead to better behaviour and better outcome. | RG-IEM, TSB and Membership | AP1.1.2 | Re-reading AP1.1.2 vs AP1.4 it now creates an alternative maybe move all metrics issues in AP1.1.2 |
| 15 | Contributors are not recognized |  |  |  | X |  |  |  | In ITU-T management positions and editors are publicly identified. However, contributors are not, leading to the impossibility for their management line / stakeholders to have any form of KPI and therefore, the only roles that can be rewarded are publicly listed roles, such as editors. This implies that there is no measurement for contributions, except for New Work Items. | RG-IEM, RG-WM, TSB | AP1.1.2 | Same remark as above |
| 16 | Success factors behind the impact of the ITU-T need to be measured and developed. |  |  |  | X |  |  |  | i) Assess, measure and explore ways to improve/develop the success factors as ITU-T impact to support its value propositionsii) RG-SOP to take over from when the value proposition is agreed as it directly inputs for the ITU Strategic Plan exercise of 2026iii) Investigate with RG-WTSA if a WTSA Resolution could support this action by a more prescriptive resolve. | RG-IEM, RG-SOP, RG-WTSA | AP1.1.2 for point i)New AP for ii) and iii) | Need a NEW AP about recognizing that Industry Engagement interlocks with other RGs and coordination may be necessary |
| 19 | Better identify the difference of major SDOs vs Consortia |  |  |  | X |  |  |  | Better identify the difference of major SDOs vs ConsortiaReflect the differences in the value proposition and in the communication of ITU-T in terms of the role of ITU-T and coordination | RG-IEM | AP1.7 |  |
| 21 | Collaboration tools (e.g., Github) should be revisited |  |  | x | X |  | x | x | a) Which tools can support and improve collaboration, development of deliverables.b) Invite potential product candidate vendors to present their solutions to ITU-T. | RG-IEM, RG-WM | AP1.4 |  |
| 24 | How to better recognize that writing code in standards and writing standards should be treated and recognized the same way |  |  |  | x |  |  |  | Investigate the assumption that writing code and writing standards is very close and at the same time highlight the differences. With the objective to put both software developers and standards developers on an equal footing. | RG-IEM | AP1.1.3 | This is a clear culture and leadership culture/leadership education issues which maybe is under represented in AP1.1.3 |
| 25 | Standardization is not seen as a recognized role in some corporate environments.  |  |  |  | X |  |  |  | Investigate how to best support current industry members to develop their own internal 'promoters' or 'translators' and collect best practices in conjunction with 'train the trainer' approaches. How to change the perception in some corporate environments and how to regroup a proper training program | RG-IEM | AP1.1.3 | As above |
| 26 | What can be done to decrease the financial bar of entry for SMEs and startups to join the ITU as sector members |  |  |  | X |  |  |  | Investigate ways to decrease the financial bar of entry for SMEs and startups to join the ITU as sector members | RG-IEM, RG-SOP | AP1.3 |  |
| 27 | Some industry segments (e.g., hyperscalers, software, IoT, other space technology, navigation technology) appear to be absent / underrepresented in ITU-T |  |  |  | x |  |  |  | Investigate the best way to promote ITU-T to underserved segments (hyperscalers, software, IoT, etc.) | RG-IEM | AP1.4 | This is as well about inclusivity and reach |
| 28 | Better define the role of ITU-T in AI | x |  | x | X |  |  | x | Investigate the best ways to clearly define the role of ITU-T in AI | RG-IEM | AP1.5 |  |
| 29 | The ITU-T is at risk of losing its relevance as this is a competitive landscape |  |  |  | x |  |  |  | Investigate what is more attractive in opensource or in specific forums of other SDOs including on a breakdown per topics (cybersecurity, cloud, etc.), e.g. why experts go to certain forum vs others and why | RG-IEM, RG-SOP | New AP or **AP1.7** | Propose a new AP on comparison/ competitive analysis? Or simply amend AP1.7 |
| 30 | the need for an external strategic assessment on standardization landscape and SDOs, forums business models |  | x |  |  |  | x |  | Further, assess international and regional standardization landscape, the current trends and business models of SDOs, forums, and venues where standardization is being shaped, to complement workshops learnings.The strategic assessment would further consider topics of SGs and new emerging topics | RG-IEM, RG-SOP |  | Agree to add new AP on such an assessment. This assessment should be done at regular basis (e.g: every wo (02) years or less). |
| 31 | Further consider to introduce per-study group industry engagement action plan |  | x |  |  |  |  |  | Study groups are at varying level of relevance, and so there might be not one size fits all approachMeasures for industry engagement to less attractive study groups might not be the same as for the more attractive ones | RG-IEM, RG-SOP |  |  |

Annex A
(to the ITU-T action plan for a vibrant engagement of the industry):
Identification of documents which contributed to this action plan

The following table identifies the documents that served as basis and contributed to this action plan:

Table 3.A.1 – Identification of documents that contributed to this action plan

| Identifier | Title | Meeting | Meeting date |
| --- | --- | --- | --- |
| TD4R1 | Report of the first TSAG meeting (Geneva, 12-16 December 2022) | TSAG | 12-16/12/2022 |
| [TD153R2](https://itu.int/md/T22-TSAG-221212-TD-GEN-0153/en) | Draft material for the development of an action plan for industry engagement | TSAG | 12-16/12/2022 |
| [DOC1](https://extranet.itu.int/meetings/ITU-T/T22-TSAGRGM/RGIEM-230131/DOCs/T22-TSAGRGM-RGIEM-230131-DOC-0001.docx) | Industry Engagement Action Plan: Framework and Basic Assumptions | RG-IEM #1 | 31/01/2023 |
| [DOC2](https://extranet.itu.int/meetings/ITU-T/T22-TSAGRGM/RGIEM-230131/DOCs/T22-TSAGRGM-RGIEM-230131-DOC-0002.docx) | Draft Skeleton of RG-IEM Deliverable | RG-IEM #1 | 31/01/2023 |
| [DOC3](https://extranet.itu.int/meetings/ITU-T/T22-TSAGRGM/RGIEM-230131/DOCs/T22-TSAGRGM-RGIEM-230131-DOC-0003.docx) | Industry Engagement: Initial Workshop Implementation Proposals | RG-IEM #1 | 31/01/2023 |
| [DOC5](https://extranet.itu.int/meetings/ITU-T/T22-TSAGRGM/RGIEM-230131/DOCs/T22-TSAGRGM-RGIEM-230131-DOC-0005.docx) | Draft report RG-IEM "Industry Engagement, Metrics", 31 January 2023 | RG-IEM #1 | 31/01/2023 |
| [DOC1R2](https://extranet.itu.int/meetings/ITU-T/T22-TSAGRGM/RGIEM-230307/DOCs/T22-TSAGRGM-RGIEM-230307-DOC-0001-R02.docx) | Draft Skeleton of RG-IEM Deliverable | RG-IEM #2 | 07/03/2023 |
| [DOC2](https://extranet.itu.int/meetings/ITU-T/T22-TSAGRGM/RGIEM-230307/DOCs/T22-TSAGRGM-RGIEM-230307-DOC-0002.docx) | Next Steps in the review of Resolution 68 (Rev. Hammamet, 2016), Evolving role of industry in ITU-T | RG-IEM #2 | 07/03/2023 |
| [DOC4](https://extranet.itu.int/meetings/ITU-T/T22-TSAGRGM/RGIEM-230307/DOCs/T22-TSAGRGM-RGIEM-230307-DOC-0004.docx) | Draft report (RG-IEM, 7 March 2023) | RG-IEM #2 | 07/03/2023 |
| [DOC1](https://extranet.itu.int/meetings/ITU-T/T22-TSAGRGM/RGIEM-230404/DOCs/T22-TSAGRGM-RGIEM-230404-DOC-0001.docx) | Draft Skeleton of RG-IEM Deliverable (revised) | RG-IEM #3 | 04/04/2023 |
| [DOC2](https://extranet.itu.int/meetings/ITU-T/T22-TSAGRGM/RGIEM-230404/DOCs/T22-TSAGRGM-RGIEM-230404-DOC-0002.docx) | Considerations about the development of the RG-IEM action plan | RG-IEM #3 | 04/04/2023 |
| [DOC3](https://extranet.itu.int/meetings/ITU-T/T22-TSAGRGM/RGIEM-230404/DOCs/T22-TSAGRGM-RGIEM-230404-DOC-0003.docx) | Some considerations for a potential ToR for a Steering Committee to execute current Industry Engagement Action Plan 2 | RG-IEM #3 | 04/04/2023 |
| [DOC5](https://extranet.itu.int/meetings/ITU-T/T22-TSAGRGM/RGIEM-230404/DOCs/T22-TSAGRGM-RGIEM-230404-DOC-0005.docx) | Draft report (RG-IEM, 4 April 2023) | RG-IEM #3 | 04/04/2023 |
| [DOC1](https://extranet.itu.int/meetings/ITU-T/T22-TSAGRGM/RGIEM-230505/DOCs/T22-TSAGRGM-RGIEM-230505-DOC-0001.docx) | [Draft] ITU-T action plan for a vibrant engagement of the industry | RG-IEM #4 | 05/05/2023 |
| [DOC5](https://extranet.itu.int/meetings/ITU-T/T22-TSAGRGM/RGIEM-230505/DOCs/T22-TSAGRGM-RGIEM-230505-DOC-0005.docx) | Draft report (RG-IEM, 5 May 2023) | RG-IEM #4 | 05/05/2023 |
| [DOC6](https://extranet.itu.int/meetings/ITU-T/T22-TSAGRGM/RGIEM-240507/DOCs/T22-TSAGRGM-RGIEM-240507-DOC-0006.docx) | Draft report of the Industry Engagement Workshop | RG-IEM #4 | 07/05/2024 |
| [DOC6](https://extranet.itu.int/meetings/ITU-T/T22-TSAGRGM/RGIEM-240617/DOCs/T22-TSAGRGM-RGIEM-240617-DOC-0006-A01.docx) Att.1 | Work in progress: revised action plan | RG-IEM #5 | 14/06/2024 |

Annex B: References
(to the ITU-T action plan for a vibrant engagement of the industry)

[b-ITU Strategic Plan] ANNEX 1 TO PP RESOLUTION 71 (REV. BUCHAREST, 2022): ITU strategic plan for 2024-2027,[https://itu.int/en/council/planning/Documents/Res71-PP2-final.pdf](https://www.google.com/url?q=https://itu.int/en/council/planning/Documents/Res71-PP2-final.pdf&source=gmail-imap&ust=1683030422000000&usg=AOvVaw1eImfLnjPMgJHE6149gjKE)

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1. Annex to Convention 1004: SIO - Any organization, other than a governmental establishment or agency, which is engaged in the study of telecommunication problems or in the design or manufacture of equipment intended for telecommunication services. Other entities and organizations in accordance with Article 19 include financial or development institutions (No. 229), other entities dealing with telecommunication matters which are approved by the Member State concerned (No. 230). [↑](#footnote-ref-1)
2. In accordance with No. 241B of the Convention, "An entity or organization referred to in Nos. 229 to 231 above may apply to participate in the work of a given study group as an Associate". Notwithstanding this provision, for purposes of this analysis Associates from industry are linked to SIOs and ROAs. [↑](#footnote-ref-2)
3. While the term “SME” is not precisely defined, *considering d)* of PP Resolution 209 is noteworthy: “that, in many countries, mainly developing countries, SMEs have become prominent actors in the industrial expansion process, and in the growth of local production, coming to represent in some cases more than 90 per cent of the national industry”. [↑](#footnote-ref-3)
4. [https://itu.int/dms\_pub/itu-s/opb/conf/S-CONF-ACTF-2022-PDF-E.pdf](https://www.itu.int/dms_pub/itu-s/opb/conf/S-CONF-ACTF-2022-PDF-E.pdf) [↑](#footnote-ref-4)