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| The International Teleocmmunication Union - Connecting the World. | **International telecommunication union****Telecommunication Standardization Bureau** |  |
|  | Geneva, 27 March 2025 |
| **Ref:** | **TSB Circular 37****SG13/TK** | **To:**- Administrations of Member States of the Union;- The State of Palestine (Res. 99 (Rev. Dubai, 2018));- ITU-T Sector Members;- ITU-T SG13 Associates;- ITU Academia**Copy to:**- The Chairs and Vice-chairs of ITU-T Study Groups;- The Director of the Telecommunication Development Bureau;- The Director of the Radiocommunication Bureau |
| **Tel:** | +41 22 730 5126 |
| **Fax:****E-mail:** | +41 22 730 5853tsbsg13@itu.int |
| **Subject:** | **Questionnaire on** **use cases of services universalization in developing countries using open networks and AI models** |

Dear Sir/Madam,

ITU-T Study Group 13 (*Future networks and emerging network technologies*) at its last meeting
(Geneva, 3 – 14 March 2025) agreed to disseminate the questionnaireon *use cases of services universalization in developing countries using open networks and AI models.* This questionnaire is targeted at the Members from the Developing Countries, but other Members are welcome to answer as well.

Study Group 13, Question 5/13 (*Applying Future Networks and innovation in developing countries*), is developing a Supplement on *use cases of services universalization in developing countries using open networks and AI models.* The analysis of the results of the survey replies will support the Q5/13 work on the above Supplement.

I invite you to participate in this survey and would appreciate it if you would complete the questionnaire reproduced in **Annex 1** no later than **30 June 2025**. Please note, however, that for more efficient reply consolidation and analysis we kindly request that the following online version of the questionnaire be used: [https://www.research.net/r/YJ3GHWN](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.research.net%2Fr%2FYJ3GHWN&data=05%7C02%7Ctsbsg13%40itu.int%7C3b67a2540b1346cda5dd08dd6c6e70a2%7C23e464d704e64b87913c24bd89219fd3%7C0%7C0%7C638785943787071832%7CUnknown%7CTWFpbGZsb3d8eyJFbXB0eU1hcGkiOnRydWUsIlYiOiIwLjAuMDAwMCIsIlAiOiJXaW4zMiIsIkFOIjoiTWFpbCIsIldUIjoyfQ%3D%3D%7C0%7C%7C%7C&sdata=b1mCiCuUE%2B9zMA59Wk59Cy7i7DE2iqL8GZsrZj2GOro%3D&reserved=0). The form in Annex 1 could be used in case there are difficulties in using the online one.

|  |  |
| --- | --- |
| I wish to thank you in advance for your participation in this survey. We value your opinion.Yours faithfully,Seizo OnoeDirector of the TelecommunicationStandardization Bureau**Annex:** 1 |  |

**ANNEX 1**

**Questionnaire on Use Cases of services universalization in developing countries using open networks and AI models**

Responder’s Information

|  |  |
| --- | --- |
| **Country:** |   |
| **Sector:** |   |
| **Organization:** |   |
| **Name:** |   |
| **Title:** |   |
| **Address:** |   |
| **Telephone:** |   |
| **Fax:** |   |
| **E-Mail:** |   |

**Instructions:**

Multiple choice to some questions is possible and is welcome.

1. **Status of IMT-2020 and beyond in network deployment**
2. **How many telecom operators have already commercially launched IMT-2020 and beyond services in your country?**

[ ]  0

[ ]  1

[ ]  2

[ ]  3

[ ]  Other (Please specify): ………………………………………………

1. **What percentage of your country's population has access to IMT-2020 and beyond services?**

[ ]  0%

[ ]  Less than 10%

[ ]  10-30%

[ ]  30-50%

[ ]  More than 50%

[ ]  Do not know

1. **How many telecom operators in your country have a focus/strong presence or market segment in rural/remote areas?**

[ ]  0

[ ]  1

[ ]  2

[ ]  3

[ ]  Other (Please specify): ………………………………………………

1. **Which sectors will benefit the most from IMT-2020 and beyond services in your country?**

[ ]  Government (e-services)

[ ]  Healthcare

[ ]  Transportation

[ ]  Education

[ ]  Entertainment and media

[ ]  Manufacturing

[ ]  Agriculture

[ ]  Retail

[ ]  Others (please specify): ………………………………………………

1. **Use of Artificial Intelligence for IMT-2020 and beyond for network deployment**
	1. **Are you currently using any AI-based technology in your telecommunication network?**

[ ]  Yes (please specify):

[ ]  No

[ ]  I don’t know

* 1. **Have you implemented strategies to use AI-based technology in your telecommunication
	 networks in the next 5 years?**

[ ]  Yes (please specify):

[ ]  No

[ ]  I don’t know

* 1. **Rate the following benefits of using Artificial Intelligence in IMT-2020 and beyond networks on a scale of 1 to 5 (1=low benefit 5=high benefit) with regards to network deployment in developing countries.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Response** | **1** | **2** | **3** | **4** | **5** |
| Service orchestration and automation |  |  |  |  |  |
| Increased network capacity and efficiency |  |  |  |  |  |
| Private network deployment |  |  |  |  |  |
| Service deployment |  |  |  |  |  |
| Increased network capacity and efficiency |  |  |  |  |  |
| Client support |  |  |  |  |  |
| Energy consumption |  |  |  |  |  |
| Open systems  |  |  |  |  |  |
| Support for innovative applications and services |  |  |  |  |  |
| Support for digital transformation in the long term |  |  |  |  |  |
| Other (Please specify and rate): …………………………… |  |  |  |  |  |

* 1. **Rate the main technical challenges or concerns about using Artificial Intelligence in IMT-2020 and beyond networks on a scale of 1 to 5 (1=low concern 5=high concern)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Response** | **1** | **2** | **3** | **4** | **5** |
| High infrastructure cost |  |  |  |  |  |
| Uncertain return on investment (RoI) |  |  |  |  |  |
| Deployment complexity |  |  |  |  |  |
| Integration with existing networks |  |  |  |  |  |
| Regulatory issues |  |  |  |  |  |
| Lack of expertise |  |  |  |  |  |
| Cybersecurity risks |  |  |  |  |  |
| Data privacy and protection concerns |  |  |  |  |  |
| Energy consumption |  |  |  |  |  |
| Other (Please specify and rate): ……………………………………………… |  |  |  |  |  |

1. **Use of Open Networks for IMT-2020 and beyond for network deployment**
	1. **Are you currently using any tool/framework/equipment that provides openness to your current telecommunication network infrastructure?**

[ ]  Yes (please specify):

[ ]  No

[ ]  I don’t know

* 1. **Have you implemented or considered strategies to use open networks in your telecommunication infrastructure for the upcoming years?**

[ ]  Yes (please specify):

[ ]  No

[ ]  I don’t know

* 1. **In your opinion, which type of network will benefit the most on the use of Open Networks for IMT-2020 and beyond in developing countries?**

[ ]  Public network

[ ]  Private Network

[ ]  Both

[ ]  I don’t know

* 1. **Has the Local Regulatory Authority implemented or considered strategies to regulate Open Networks for IMT-2020 and beyond for network deployment:**

[ ]  Yes (please specify):

[ ]  No

[ ]  I don’t know

* 1. **On a scale of 1 to 5, where do you consider the use of open networks and open interfaces will benefit your current telecommunication network? (1=low benefit, 5=high benefit)?**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Response** | **1** | **2** | **3** | **4** | **5** |
| Access Network  |  |  |  |  |  |
| Private Network Deployment |  |  |  |  |  |
| Service Deployment |  |  |  |  |  |
| OPEX and CAPEX optimization |  |  |  |  |  |
| Core Network |  |  |  |  |  |
| Scalability |  |  |  |  |  |
| Other (Please specify and rate): ……………………………………………… |  |  |  |  |  |

* 1. **On a scale of 1 to 5, which do you consider the use of open networks and open interfaces will present the major challenges for your current telecommunication network? (1=low challenge, 5=major challenge)?**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Response** | **1** | **2** | **3** | **4** | **5** |
| Infrastructure cost |  |  |  |  |  |
| Deployment complexity |  |  |  |  |  |
| Integration with existing networks |  |  |  |  |  |
| Regulatory issues |  |  |  |  |  |
| Lack of expertise |  |  |  |  |  |
| Equipment and Software providers |  |  |  |  |  |
| Cybersecurity risks |  |  |  |  |  |
| Data privacy and protection concerns |  |  |  |  |  |
| Energy consumption  |  |  |  |  |  |
| Customer adoption |  |  |  |  |  |
| Device availability and compatibility |  |  |  |  |  |
| Other (Please specify and rate): ……………………………………………… |  |  |  |  |  |

1. **Network Deployment Landscape**
	1. **Which IMT-2020 and beyond use cases do you consider would benefit from using artificial intelligence and open networks for network deployment?**

|  |  |  |  |
| --- | --- | --- | --- |
| **IMT-2020 and beyond use cases** | **Short-term****(within 1 year)** | **Mid-term****(1 to 3 years)** | **Long-term****(More than 3 years)** |
| **High-speed mobile Internet access** |  |  |  |
| **Fixed Wireless Access (FWA)** |  |  |  |
| Augmented Reality (AR) and Virtual Reality (VR) |  |  |  |
| Enhanced entertainment and media (including gaming) |  |  |  |
| e-Government  |  |  |  |
| **Healthcare applications and telemedicine** |  |  |  |
| **Smart agriculture** |  |  |  |
| **Smart transportation and autonomous vehicles** |  |  |  |
| **Industrial automation and smart factories** |  |  |  |
| **Public safety and emergency services** |  |  |  |
| **Cloud computing and edge computing** |  |  |  |
| **Environmental monitoring** |  |  |  |
| Smart grids and energy management |  |  |  |
| Smart retail solutions |  |  |  |
| Education and e-learning |  |  |  |
| Other (Please specify): ………………………………… |  |  |  |

* 1. **What are the key considerations for prioritizing IMT-2020 and beyond use cases in your country when using artificial intelligence and open networks? Rate the following considerations on a scale of 0 to 5 (1= least important, 5 = most important):**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Response** | **1** | **2** | **3** | **4** | **5** |
| Economic benefits |  |  |  |  |  |
| Technological maturity |  |  |  |  |  |
| Digital inclusion and societal needs and benefits |  |  |  |  |  |
| Alignment with national regulatory frameworks and policies |  |  |  |  |  |
| Compliance to standards |  |  |  |  |  |
| Infrastructure availability  |  |  |  |  |  |
| Ease of adoption |  |  |  |  |  |
| Cost and maintenance |  |  |  |  |  |
| Scalability and sustainability |  |  |  |  |  |
| Other (Please specify and rate): ……………………………………………… |  |  |  |  |  |

*Thank you for your active participation in this survey!*

If you have questions, please, contact us at tsbsg13@itu.int.

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