|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ITU Logo | INTERNATIONAL TELECOMMUNICATION UNION  **TELECOMMUNICATION STANDARDIZATION SECTOR**  STUDY PERIOD 2017-2020 | | FG-AI4H-I-101 | |
| **ITU-T Focus Group on AI for Health** | |
| **Original: English** | |
| **WG(s):** | | Plenary | E-meeting, 7-8 May 2020 | |
| **DOCUMENT** | | | | |
| **Source:** | | FG-AI4H | | |
| **Title:** | | Report of the 9th meeting (Meeting I) of the Focus Group on Artificial Intelligence for Health (E-meeting, 7-8 May 2020) | | |
| **Purpose:** | | Admin | | |
| **Contact:** | | Thomas Wiegand Fraunhofer HHI Germany | | Email: [thomas.wiegand@hhi.fraunhofer.de](mailto:thomas.wiegand@hhi.fraunhofer.de) |

|  |  |
| --- | --- |
| **Abstract:** | This document contains the report of the 9th meeting of the ITU-T Focus Group on Artificial Intelligence for Health (FG-AI4H), held as an E-meeting, 7-8 May 2020. |

Executive summary

Working group updates:

* Agreed to create the WG on Clinical Evaluation, subject to the clarification of its terms of reference and approval by the remote consensus via the FG-AI4H mailing list. Naomi Lee (Lancet, UK) will lead the group
* Agreed to launch an ad hoc group on digital technologies for COVID health emergency, coordinated by [Shan Xu](mailto:xushan@caict.ac.cn) (CAICT, China) and [Ana Rivière Cinnamond](mailto:rivierea@paho.org), PAHO/WHO. The ToR will be circulated for remote consensus two-week consultation and approval via the FG-AI4H mailing list.

Topic group updates:

* New TG on Endoscopy (TG-Endoscopy) with [Jianrong Wu](mailto:edwinjrwu@tencent.com) (Tencent Healthcare, China) as Topic Driver. The collaboration site for the new TG is <https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/tg/SitePages/TG-Endoscopy.aspx>.

Deliverables update:

* New DEL00: "Overview of the FG-AI4H deliverables" with Shan Xu (CAICT, China) as editor. The initial draft is found in [I-211](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-211.docx).
* All available deliverables were reviewed and will be shared with SG16. The latest version of the deliverables is found in the [FG-AI4H collaboration site](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/SitePages/Deliverables.aspx).

Agreed to prepare a report to ITU-T SG16 at its virtual meeting, 22 June – 3 July 2020 including:

* Most recent results (New Delhi, Brasilia and Virtual meetings), including the current deliverables plus the updated whitepaper
* Request to renew the lifetime of the FG-AI4H for another two years (until September 2022)

It was agreed to update the following output documents, after an editing period after the meeting:

* [I-102](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-102.docx): Updated call for proposals: use cases, benchmarking, and data (to be published once the final dates of the next FG-AI4H meeting are defined)
* [I-105](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-004.docx): Updated TDD Template
* [I-200](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-200.docx): Updated list of FG-AI4H deliverables
* [FG-AI4H whitepaper](https://www.itu.int/en/ITU-T/focusgroups/ai4h/Documents/FG-AI4H_Whitepaper.pdf)

The following documents were reconfirmed:

* [F-103](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-F-103.docx): Updated FG-AI4H data acceptance and handling policy
* [C-104](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-C-104.docx): Thematic classification scheme
* [F-105](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-F-105.docx): ToRs for the WG-Experts and call for experts
* [F-106](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-F-106.docx): Guidelines on FG-AI4H online collaboration tools
* [G-107](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-G-107.docx): Onboarding document (it will be updated at the next meeting)

The meeting had 132 participants over the various days and reviewed 51 documents (not counting attachments).

A list of the 14 decisions taken at the meeting is found in Annex [E](#AnnexE) of the report.

The next meeting of the FG-AI4H will be in held virtually in September 2020, dates TBD to be communicated in the FG-AI4H webpage and mailing list.

**CONTENTS**

1 Opening 6

2 Approval of agenda 6

3 Documentation and allocation 6

4 IPR 6

5 Management updates 6

6 Approval of Meeting H outcomes and updates 6

7 Information on AI-related activities 6

8 Review of incoming liaison statements 7

8.1 ITU-T SG17 7

9 Renewal of the FG-AI4H term 7

10 FG-AI4H deliverables 7

10.1 New deliverable proposals 10

10.1.1 DEL00: Overview deliverable 10

10.1.2 Unified data annotation tool - Draft requirements study for a possible DEL05.[7] 10

10.2 DEL02: AI4H regulatory best practices 10

10.2.1 DEL02.1: Mapping of IMDRF essential principles to AI for health software and DEL02.2: Guidelines for AI based medical device: Regulatory requirements 11

10.3 DEL03: AI4H requirements specifications 11

10.4 DEL5: Data specification 12

10.4.1 DEL05.1: Data requirements 12

10.4.2 DEL05.2: Data acquisition 12

10.4.3 DEL05.3: Data annotation specification 12

10.4.4 DEL05.4: Training and test data specification 12

10.4.5 DEL05.5: Data handling 12

10.4.6 DEL05.6: Data sharing practices 12

10.5 DEL06: AI Training best practices specification 13

10.6 DEL07: AI for health evaluation considerations 13

10.6.1 DEL07.2: AI technical test specification 13

10.6.2 DEL07.3: Data and artificial intelligence assessment methods (DAISAM) reference 13

10.6.3 Updates on the preparation of DEL07.4: Clinical evaluation 13

10.7 DEL08: AI4H scale-up and adoption 13

10.8 DEL09: AI4H applications and platforms 14

10.8.1 DEL09.1: Mobile Applications 14

10.8.2 DEL09.2: Cloud-based AI applications 14

10.9 DEL10: Use cases of the ITU/WHO Focus Group on AI for Health: introduction to the topic description documents 14

11 Horizontal and strategic topics 14

12 Working Group updates 15

12.1 Data and AI solution assessment methods (WG-DAISAM) 15

12.2 Data and AI solution handling (WG-DASH) 15

12.3 Operations (WG-O) 15

12.4 Ethical considerations on AI for health (WG-Ethics) 16

12.5 Regulatory considerations on AI for health (WG-RC) 16

12.6 Clinical Evaluation (WG-CE) 16

12.7 New WG on AI and other digital technologies for COVID-19 health emergencies 17

13 Updates and new proposals for existing TGs 17

13.1 Template updates: TDD, CfTGP 18

13.2 TG-Cardio (Cardiovascular Risk Prediction) 18

13.3 TG-Derma (Dermatology) 18

13.4 TG-Bacteria (Diagnoses of bacterial infection and anti-microbial resistance - AMR) 18

13.5 TG-DiagnosticCT (Volumetric chest computed tomography) 19

13.6 TG-Dental (Dental diagnostics and digital dentistry) 19

13.7 TG-FakeMed: AI-based detection of falsified medicine 19

13.8 TG-Falls (Falls among the elderly) 19

13.9 TG-Histo (Histopathology) 20

13.10 TG-Malaria: Malaria detection 20

13.11 TG-MCH: Maternal and child health 20

13.12 TG-Neuro: Neurological disorders 20

13.13 TG-Ophthalmo (Ophthalmology) 20

13.14 TG-Outbreaks (AI for Outbreak Detection) 21

13.15 TG-Psy (Psychiatry) 21

13.16 TG-Snake (Snakebite and snake identification) 21

13.17 TG-Symptom (Symptom assessment) 21

13.18 TG-TB (Tuberculosis) 21

13.19 TG-Radiology (Radiology) 22

13.20 TG-Diabetes 22

14 Proposals for new topic areas 22

14.1 Proposal for new topic group: Endoscopy 22

15 Review / reconfirmation of previous output documents 23

16 Working methods 23

17 Outcomes of this meeting 23

17.1 WG updates 23

17.2 TG updates 23

17.3 Output liaison statements 24

17.4 Output documents 24

17.5 Deliverables and parent group reporting 24

18 Future work 24

18.1 Schedule of future FG meetings and workshops 24

18.2 Work plan and timeline 25

18.3 Interim activities (online) 25

19 Promotion and outreach 25

20 A.O.B. 25

21 Closing 25

Annex A Agenda 26

Annex B: Documentation 30

Annex C: List of participants 34

Annex D Summary of FG-AI4H resources and electronic working methods 40

Annex E Summary of decisions 43

# Opening

The meeting was opened by the FG-AI4H chairman, Mr Thomas Wiegand (Fraunhofer HHI, Germany), who welcomed the participants, followed by the ITU-T SG16 chairman, Mr Noah Luo (Huawei Technologies, China).

# Approval of agenda

The agenda in [I-001](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-001.docx) (Agenda) was approved. Various updates were issued during the meeting, the final version being found in [I-001-R2](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-001-R02.docx).

The time allocation for the presentation of meeting documents was maintained live though the link <https://docs.google.com/spreadsheets/d/1HN-wFi_gRUpRmDoX7c9B6IUmNpwt0_0CHQJYJB-zk9o/edit?usp=sharing>.

# Documentation and allocation

The initial list of documents and allocation (also in [I-001](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-001.docx) & Annex [B](#AnnexB)) was adopted.

# IPR

The text in [I-001](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-001.docx) Annex A was read and no declarations were made at the meeting.

It was highlighted that the IPR question should be asked periodically under the various TG (e‑)meetings, since many of participants in those may not be attending the FG-AI4H Plenary meetings.

1. TG Drivers are asked to read the IPR call as found in [I-001-R2](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-001-R02.docx) Annex A and collect any declarations of made in return to the IPR question in their meeting minutes.

# Management updates

No updates were made to the FG-AI4H management at this meeting.

# Approval of Meeting H outcomes and updates

The meeting report of the Brasilia meeting in [H-101-R01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-101-R01.docx) was approved without comments.

The following documents from the Brasilia meeting were noted by the meeting:

* [H-102-R01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-102-r01.docx): Updated call for Proposals: use cases, benchmarking, and data
* [H-200-R01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-200-R01.docx): Updated list of FG-AI4H deliverables

1. The report of the Brasilia meeting in [H-101-R01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-101-R01.docx) was approved without comments and its two output documents were noted ([H-102-R01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-102-r01.docx) and [H-200-R01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-200-R01.docx)).

# Information on AI-related activities

[I-002](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-002.pptx): Information on AI/ML challenge

Mr Vishnu Ram introduced the document describing the upcoming AI/ML 5G challenge. All are encouraged to join, especially students and academia. The document was noted.

# Review of incoming liaison statements

## ITU-T SG17

The reply LS in [I-025](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-025.docx) informs the FG-AI4H that it has started studying techniques related to homomorphic encryption and are initially preparing a technical report (see current draft in [Attachment 1](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-025-A01.docx) to the LS). They encourage feedback and continued collaboration. The document was noted and no reply was felt necessary.

# Renewal of the FG-AI4H term

The chairman reminded the meeting that the initial two-year term of the FG-AI4H would be finishing in September 2020. Given the current level of progress of the deliverables, it was stated that an extension of two additional years would be necessary.

The meeting agreed to request the extension of the term of the FG-AI4H by an additional two years to the FG parent group, ITU-T SG16, at its next meeting, online 22 June – 3 July 2020. At the same time, in addition to the regular progress report, the current version of the deliverables would be provided for information to ITU-T SG16, as an indication of the progress that has been achieved so far that substantiates the extension request.

1. Agreed to provide to ITU-T SG16, the FG-AI4H parent group, a snapshot of the FG-AI4H deliverables and to request ITU-T SG16 to extend the term of the FG-AI4H by an additional two years (i.e. till September 2022).

# FG-AI4H deliverables

[I-005](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-005.docx): Updated list of FG-AI4H deliverables (as of 2020-05-07) [TSB]

The document was noted, and it would be updated after the meeting according to the discussions affecting deliverables as shown in Table 1 hereinafter, also issued as [I-200](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-200.docx) out of this meeting.

The meeting reviewed progress for the various deliverables un the next sub-sections of this report. No updates were provided during the meeting for the following documents:

* DEL1 (AI4H ethics considerations, [Andreas Reis](mailto:reisa@who.int), WHO)  
  NB – see report under WG Ethics, §12.4.
* DEL4 (AI software life cycle specification, [Pat Baird](mailto:pat.baird@philips.com), Philips, USA)
* DEL7.1 (AI4H evaluation process description; [Sheng Wu](mailto:wus@who.int), WHO)

The latest version of the deliverables can always be found in the FG-AI4H collaboration site at <https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/SitePages/Deliverables.aspx>.

Table 1 – Updated list of deliverables (I-005 plus updates)

| No. | Deliverable | Updated initial draft editor | Availability\* |
| --- | --- | --- | --- |
| 0 | Overview of FG-AI4H deliverables | [Shan Xu](mailto:xushan@caict.ac.cn) (CAICT, China) | [I-211](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-211.docx) |
| 1 | AI4H ethics considerations | [Andreas Reis](mailto:reisa@who.int) (WHO) | [G-201](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-G-201.docx) |
| 2 | AI4H regulatory [best practices | considerations] | [Jackie Ma](mailto:jackie.ma@hhi.fraunhofer.de) (Fraunhofer HHI, Germany), [Khair ElZarrad](mailto:mohammed.elzarrad@fda.hhs.gov) & [Rose Purcell](mailto:Rosemarie.Purcell@fda.hhs.gov) (FDA, USA) | [I-038](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-038.docx) |
| 2.1 | Mapping of IMDRF essential principles to AI for health software | [Luis Oala](mailto:luis.oala@hhi.fraunhofer.de) (Fraunhofer HHI, Germany), [Pradeep Balachandran](mailto:pbn.tvm@gmail.com) (Technical Consultant eHealth, India), [Pat Baird](mailto:pat.baird@philips.com) (Philips, USA), [Thomas Wiegand](mailto:thomas.wiegand@hhi.fraunhofer.de) (Fraunhofer HHI, Germany) | [G-038](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-G-038.docx),  [G-038-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-G-038-A01.xlsx) |
| 2.2 | Regulatory checklist | [Pradeep Balachandran](mailto:pbn.tvm@gmail.com) (India) and [Christian Johner](mailto:christian.johner@johner-institut.de) (Johner Institut, Germany) | [I-036](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-036.pptx) & [Nextcloud document](https://datacloud.hhi.fraunhofer.de/nextcloud/s/izz73RgE474Rq9g) |
| 3 | AI4H requirements specification | [Pradeep Balachandran](mailto:pbn.tvm@gmail.com) (India) | [I-033](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-033.docx) |
| 4 | AI software life cycle specification | [Pat Baird](mailto:pat.baird@philips.com) (Philips, USA) | [I-204](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-204.docx) |
| 5 | Data specification | [Marc Lecoultre](mailto:ml@mllab.ai) (MLlab.AI, Switzerland) | [G-205](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-G-205.docx) |
| 5.1 | Data requirements | [[Gupta Saurabh](mailto:drsaurabhmd@gmail.com) (AIIMS, India), [Manjula Singh](mailto:singhmanjula.hq@icmr.gov.in) (ICMR, India)]\*\* | [I-044](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-044.docx) |
| 5.2 | Data acquisition | [Rajaraman (Giri) Subramanian](mailto:kinnal@hotmail.com) (Calligo Tech, India), [Vishnu Ram](mailto:vishnu.n@ieee.org) (India) | [G-205-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-G-205-A02.docx) |
| 5.3 | Data annotation specification | [Shan Xu](mailto:xushan@caict.ac.cn) (CAICT, China), [Harpreet Singh](mailto:hsingh@bmi.icmr.org.in) (ICMR, India), [Sebastian Bosse](mailto:sebastian.bosse@hhi.fraunhofer.de) (Fraunhofer HHI, Germany) | [I-043-R01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-043-R01.docx" \t "_blank) |
| 5.4 | Training and test data specification | [Luis Oala](mailto:luis.oala@hhi.fraunhofer.de) (Fraunhofer HHI, Germany), [Pradeep Balachandran](mailto:pbn.tvm@gmail.com) (India) | [I-034](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-034.docx) |
| 5.5 | Data handling | [Marc Lecoultre](mailto:ml@mllab.ai) (MLlab.AI, Switzerland) | [DEL05](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL05.docx) |
| 5.6 | Data sharing practices | [Ferath Kherif](mailto:Ferath.Kherif@chuv.ch) (CHUV, Switzerland), [Banusri Velpandian](mailto:banusrir@gmail.com) (ICMR, India), WHO Data Team | [I-046](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-046.docx) [G-205-A06](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-G-205-A06.docx) |
| 6 | AI training best practices specification | [Xin Ming Sim](mailto:xinming@aisingapore.org) and [Stefan Winkler](mailto:stefan@aisingapore.org) (AI Singapore) | [I-032](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-032.docx) |
| 7 | AI4H evaluation considerations | [Markus Wenzel](mailto:markus.wenzel@hhi.fraunhofer.de) (Fraunhofer HHI, Germany) | [I-028](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-028.docx) |
| 7.1 | AI4H evaluation process description | [Sheng Wu](mailto:wus@who.int) (WHO) | [G-207-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-G-207-A01.docx) |
| 7.2 | AI technical test specification | [Auss Abbood](mailto:abbooda@rki.de) (Robert Koch Institute, Germany) | [I-027](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-027.pptx) |
| 7.3 | Data and artificial intelligence assessment methods (DAISAM) reference | [Luis Oala](mailto:luis.oala@hhi.fraunhofer.de) (Fraunhofer HHI, Germany) | [I-035](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-035.docx) & [Live version](https://docs.google.com/spreadsheets/d/1u3p5QrqkArL8_tJ8I1O5_j3qYIeycYLP0TD0siWmfM4/edit?usp=sharing) |
| 7.4 | Clinical evaluation | [Naomi Lee](mailto:naomi.lee@lancet.com), [Rupa Sarkar](mailto:rupa.sarkar@lancet.com) (Lancet, UK) | [I-051](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-051.docx) |
| \*\*\* 7.[5] | Assessment platform | [Luis Oala](mailto:luis.oala@hhi.fraunhofer.de) (Fraunhofer HHI, Germany), [Steffen Vogler](mailto:steffen.vogler@bayer.com) (Bayer, Germany) | [I-037](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-037.docx) & [Git live version](https://gitlab.hhi.fraunhofer.de/fgai4h/assessment-platform) |
| 8 | AI4H scale-up and adoption | [Sameer Pujari](mailto:pujaris@who.int) (WHO) and Robyn Whittaker (New Zealand) | – |
| 9 | AI4H applications and platforms | [Manjeet Chalga](mailto:chalgams.hq@icmr.gov.in) (ICMR, India), [Aveek De](mailto:aveek@cms-india.org) (CMS, India) | [I-050](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-050.docx) |
| 9.1 | Mobile applications | [Khondaker Mamun](mailto:mamun@cse.uiu.ac.bd) (UIU, Bangladesh), [Manjeet Chalga](mailto:chalgams.hq@icmr.gov.in) (ICMR, India) | [I-048](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-048.docx) |
| 9.2 | Cloud-based AI applications | [Khondaker Mamun](mailto:mamun@cse.uiu.ac.bd) (UIU, Bangladesh) | [I-049](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-049.docx) |
| 10 | AI4H use cases: Topic description docs. | [Eva Weicken](mailto:eva.weicken@hhi.fraunhofer.de) (Fraunhofer HHI, Germany) | [I-030](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-030.docx) |
| 10.1 | Cardiovascular disease management (TG-Cardio), including *risk prediction* and *clinical prediction* sub-topics | [Benjamin Muthambi](mailto:brm5@caa.columbia.edu) (Watif Health, South Africa) | [G-006](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-G-006.docx) (general) |
| 10.1  A | Cardiovascular disease management (TG-Cardio), *risk prediction* sub-topic | [Benjamin Muthambi](mailto:brm5@caa.columbia.edu) (Watif Health, South Africa) | [I-006-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-006-A01.docx) (risk prediction) |
| 10.2 | Dermatology (TG-Derma) | [Maria Vasconcelos](mailto:maria.vasconcelos@fraunhofer.pt) (Fraunhofer Portugal) | [I-007-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-007-A01.docx) |
| 10.3 | Diagnosis of bacterial infection and anti-microbial resistance (TG-Bacteria) | [Nada Malou](mailto:nada.malou@paris.msf.org) (MSF, France) | – |
| 10.4 | Falls among the elderly (TG-Falls) | [Inês Sousa](mailto:ines.sousa@fraunhofer.pt) (Fraunhofer Portugal) | [I-012-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-012-A01.docx) |
| 10.5 | Histopathology (TG-Histo) | [Frederick Klauschen](mailto:frederick.klauschen@charite.de) (Charité Berlin, Germany) | [I-013-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-013-A01.docx) |
| 10.6 | Malaria detection (TG-Malaria) | [Rose Nakasi](mailto:g.nakasi.rose@gmail.com) (Makerere University, Uganda) | [I-014-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-014-A01.docx) |
| 10.7 | Maternal and child health (TG-MCH) | [Raghu Dharmaraju](mailto:rdharmaraju@gmail.com) (Wadhwani AI, India) and [Alexandre Chiavegatto Filho](mailto:alexdiasporto@usp.br) (University of São Paulo, Brazil) | [I-015-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-015-A01.docx) |
| 10.8 | Neurological disorders (TG-Neuro) | [Marc Lecoultre](mailto:ml@mllab.ai) (MLlab.AI, Switzerland) | [I-016-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-016-A01.docx) |
| 10.9 | Ophthalmology (TG-Ophthalmo) | [Arun Shroff](mailto:arunshroff@gmail.com) (MedIndia) | [I-017-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-017-A01.docx) |
| 10.10 | Outbreak detection (TG-Outbreaks) | [Auss Abbood](mailto:abbooda@rki.de) (Robert Koch Institute, Germany) and [Stéphane Ghozzi](mailto:stephane.ghozzi@helmholtz-hzi.de) (HZI, Germany) | [I-018-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-018-A01.docx) |
| 10.11 | Psychiatry (TG-Psy) | [Nicolas Langer](mailto:n.langer@psychologie.uzh.ch) (ETH Zurich, Switzerland) | [I-019-A01-R01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-019-A01-R01.docx) |
| 10.12 | AI for radiology (TG-Radiology) | [Darlington Ahiale Akogo](mailto:darlington@gudra-studio.com) (minoHealth AI Labs, Ghana) | [I-023-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-023-A01.docx) |
| 10.13 | Snakebite and snake identification (TG-Snake) | [Rafael Ruiz de Castaneda](mailto:Rafael.RuizDeCastaneda@unige.ch) (UniGE, Switzerland) | [I-020-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-020-A01.docx) |
| 10.14 | Symptom assessment (TG-Symptom) | [Henry Hoffmann](mailto:henry.hoffmann@ada.com) (Ada Health, Germany) | [I-021-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-021-A01.docx) |
| 10.15 | Tuberculosis (TG-TB) | [Manjula Singh](mailto:singhmanjula.hq@icmr.gov.in) (ICMR, India) | [I-022-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-022-A01.docx) |
| 10.16 | Volumetric chest CT (TG-DiagnosticCT) | [Kuan Chen](mailto:ckuan@infervision.com) (Infervision, China) | [I-009-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-009-A01.docx) |
| 10.17 | Dental diagnostics and digital dentistry (TG-Dental) | [Falk Schwendicke](mailto:falk.schwendicke@charite.de) and [Joachim Krois](mailto:Joachim.krois@charite.de) (Charité Berlin, Germany); [Tarry Singh](mailto:tarry.singh@deepkapha.ai) (deepkapha.ai, Netherlands) | [I-010-A1](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-010-A01.docx) |
| 10.18 | Falsified Medicine (TG-FakeMed) | [Franck Verzefé](mailto:fverzefe@gmail.com) (TrueSpec-Africa, DRC) | – |
| 10.19 | Primary and secondary diabetes prediction (TG-Diabetes) | [Andrés Valdivieso](mailto:avaldivieso@anastasia.ai) (Anastasia.ai, Chile) | [I-024-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-024-A01.docx) |
| 10.20 | AI for endoscopy (TG-Endoscopy) | [Jianrong Wu](mailto:edwinjrwu@tencent.com) (Tencent Healthcare, China) | [I-052-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-052-A01.docx) |

\* NOTE: The document numbers indicated reflect the status as of the start of the Brasilia meeting (H) and Geneva Virtual meeting (I). Colour codes indicate deliverable drafting status (as of the issuance of this document) as "*active*" (green) and "*unclear whether active*" (blue). Updates will be issued as I-200 series.

\*\* Need replacement editors.

\*\*\* Provisional number, to be confirmed.

## New deliverable proposals

### DEL00: Overview deliverable

[I-029-R03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-029-R03.docx) [CAICT] was introduced by

The document proposes the creation of an overview deliverable, whose draft is provided in the document. Several consultations were held with deliverable editors and included in the latest revision of the document. It was agreed to include it, labelling for the moment as "Deliverable 0".

It was noted that the TDD template should be aligned with the structure of the deliverables, DEL00 could be used to guide a checking of the TDD template prior to its issuance as an output document of this meeting.

The editor is Ms Shan Xu (CAICT, China), and the output draft is found in [I-211](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-211.docx).

1. Agreed to create a DEL00 document "Overview of the FG-AI4H deliverables" with Shan Xu (CAICT, China) as editor. The initial draft is found in [I-211](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-211.docx).
2. Agreed to take into account the content of DEL00 to review the TDD template, to ensure that all horizontal deliverable elements are taken into account for the description of each of the topic areas.

### Unified data annotation tool - Draft requirements study for a possible DEL05.[7]

The document in [I-047](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-047.docx) was presented by Marc Lecoultre and Luis Oala using the slides in [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-047-A01.pptx). proposing a description of the requirements for an annotation tool planned for subsequent implementation as an open source software. The proposal as denoted as DEL5.x during the meeting and is numbered provisionally as

Currently, Marc and Luis are gathering the requirements for the tool, not yet implementing. Need feedback from TGs for their current needs. This groundwork would also assist with validation of the tool once the code is written.

A point raised was whether a software for annotation would be subject to medical industry regulations, and if so, what aspects would need to be observed? It would be good that its implementation were guided by regulatory considerations that would allow them to be validated in a software quality control chain that would be part of the regulatory clearance of the a solution that used data annotated by it. It was noted that implementors of medical software solutions, in particular in the open source community, are usually not paying attention to the software quality process methodology (that include a regulatory clearance) and this may impact later adoption of the solutions they develop. The deliverables of the FG should include applicable regulatory considerations that could assist implementors in their tasks.

It was unclear whether this should be a new deliverable, as the final objective is to have running code that would be a support for the Deliverables in the DEL05.x group. It is provisionally denoted as DEL05.[7], for easier reference; how to best incorporate it will be decided at a later stage.

1. Agreed to pursue the specification of requirements for an annotation tool, provisionally denoted as DEL5.7. Marc Lecoultre and Luis Oala will drive this process. The TG Drivers are kindly requested to support Marc and Luis in this initiative, initially by reviewing [I-047](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-047.docx) and providing feedback to them.

## DEL02: AI4H regulatory best practices

The update on the progress of DEL2 was presented by Khair ElZarrad (FDA, USA) on behalf of the editors (see [I-038](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-038.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-038-A01.pptx)).

Progress on this deliverable is dictated by the progress in the work of the WG-RC, which met for the first time only a few days before than this FG meeting, virtually. See §12.5 for the report. More progress is expected for the next meeting of the FG-AI4H.

### DEL02.1: Mapping of IMDRF essential principles to AI for health software and DEL02.2: Guidelines for AI based medical device: Regulatory requirements

[Christian Johner](mailto:christian.johner@johner-institut.de) (Johner Institute, Germany) presented [I-036](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-036.docx) on behalf of the editors with the slides in [I-036-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-036-A01.pptx), which contained a progress report on DEL2.1 and DEL2.2.

DEL2.2 has progressed well in the meantime, in coordinated discussions with the WG-RC members, during a number of conference calls and exchanges.

## DEL03: AI4H requirements specifications

[Pradeep Balachandran](mailto:pbn.tvm@gmail.com) presented the update for DEL3 in [I-033](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-033.docx) plus [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-033-A01.pptx).

DEL3 contains a list of requirements for the following aspects of AI in health:

* High-level product specification
* System functions
* User types /classes and characteristics
* Operating conditions / environment
* Design and implementation constraints
* System interface requirements
* Non-functional requirements
* System design requirements
* System deployment requirements
* User documentation / training requirements
* Assumptions and dependencies
* Quality process compliance
* Risk management requirements
* Change management requirements
* System validation requirements

Requirements should have ID, definition, explanation, criticality of Requirement and the priority for their implementation (for future use).

It was noted that implementations following the guidelines should not be blocked from the using the benchmarking. Also, that TDDs should have consider these requirements, their broad impact / importance on a particular topic area, and how they should be customized for it. The assessment platform should take these requirements into consideration as well (system-level metrics).

One concern expressed was the possible duplication of themes across deliverables. It was suggested that some consideration should be given to combining these requirements with the training spec.

It was agreed to ask the TG Drivers to review the broad structure of the Deliverable and provide feedback to Pradeep.

1. TG Drivers to review the broad structure of DEL 3 as found in [in the deliverables page](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL03.docx) and provide feedback to [Pradeep Balachandran](mailto:pbn.tvm@gmail.com).

## DEL5: Data specification

The editor of [DEL05](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL05.docx) is [Marc Lecoultre](mailto:ml@mllab.ai) (MLlab.AI, Switzerland). The latest update was reviewe3d at the Brasilia meeting H. Discussions at this meeting focused on progressing the various sub-deliverables, as described next.

### DEL05.1: Data requirements

The editors of DEL5.1, [Gupta Saurabh](mailto:drsaurabhmd@gmail.com) (AIIMS, India), [Manjula Singh](mailto:singhmanjula.hq@icmr.gov.in) (ICMR, India), did not present an update. Marc Lecoultre, overall editor of Deliverable 5, and Markus Wenzel prepared the initial draft for DEL5.1 found in [I-044](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-044.docx) based on the introduction from the previous data policy document drafted in WG-DASH.

Lacking feedback from the current editors, the FG-AI4H agreed that new editors should be identified to ensure progress of this draft.

### DEL05.2: Data acquisition

[Rajaraman (Giri) Subramanian](mailto:kinnal@hotmail.com) (Calligo Tech, India) and [Vishnu Ram](mailto:vishnu.n@ieee.org) (India) are the editors. Giri informed the meeting that the last version of the deliverable was found G-205-A02 (New Delhi meeting), which tries to address the lack of widely-accepted, standardized ways to acquire medical data. A scalable platform would be needed.

Marc Lecoultre, who oversees the parent Deliverable 5, noted that DEL5.2 needs to be focused on data acquisition, while the more general considerations should be added in DEL5 itself. He also noted that some of the aspects in G-205-A02 are already addressed in other deliverables. Removing these repetition elements would simplify the task of preparing this deliverable.

The editors call for contributions to improve the draft, to contact [giri@calligotech.com](mailto:giri@calligotech.com).

### DEL05.3: Data annotation specification

The update of DEL5.3 in [I-043](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-043.docx) was presented Shan Xu on behalf of the editors.

Data annotation is an essential element for AI for health. Feedback is being sought from all via a questionnaire, which is found online at: <https://forms.gle/3fYrm3SZSrNQu3eeA>.

### DEL05.4: Training and test data specification

The editors of DEL5.4 are [Luis Oala](mailto:luis.oala@hhi.fraunhofer.de) (Fraunhofer HHI, Germany), [Pradeep Balachandran](mailto:pbn.tvm@gmail.com) (India). The update in [I-034](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-034.docx) complemented by [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-034-A01.pptx) was presented by Luis.

Collect best practices and develop a reference framework and glossary / "encyclopaedia" that can be used by the topic groups as well as in the development of the processing platform. Luis noted that there is some overlap, e.g. with the data annotation document. Editors would like to validate the usefulness of this document with the topic groups. The document could also benefit from some consolidation.

### DEL05.5: Data handling

The editor of DEL05.5 is [Marc Lecoultre](mailto:ml@mllab.ai) (MLlab.AI, Switzerland), who presented the updated draft in [I-045](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-045.docx).

### DEL05.6: Data sharing practices

The editors of DEL05.6 are [Ferath Kherif](mailto:Ferath.Kherif@chuv.ch) (CHUV, Switzerland), [Banusri Velpandian](mailto:banusrir@gmail.com) (ICMR, India), assisted by the WHO Data Team. Ferath presented the updated draft in [I-046](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-046.docx), which is the 2nd draft. For a future update, the editor will add reference to data sharing agreement requirements, in addition to EU policies.

The editors requested comments, and An Xiaomi [xiaomi@ruc.edu.cn](mailto:xiaomi@ruc.edu.cn), Ananya Gangavarapu and others agreed to provide comments.

## DEL06: AI Training best practices specification

The editors of DEL6 are [Xin Ming Sim](mailto:xinming@aisingapore.org) and [Stefan Winkler](mailto:stefan@aisingapore.org) (AI Singapore). The update in [I-032](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-032.docx), supplemented by the slides in [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-032-A01.pptx), was presented by Stefan.

This document covers best practices for the training part of the training part of the AI tool development workflow, including selection of AI models, under- and over-fitting, hyperparameter optimization, treatment of missing data and AI model generalization. The document also provides a model reporting framework for transparency purposes that includes model details, use cases and typical users, model performance metrics and factors, data, analysis and ethics.

Suggestions:

* Develop spec sheets that can be used across different deliverables and have a common format to present the information
* Add the scenario where, instead of training models, health experts add knowledge directly into AI for expert systems.

## DEL07: AI for health evaluation considerations

The editor of DEL7 is [Markus Wenzel](mailto:markus.wenzel@hhi.fraunhofer.de) (Fraunhofer HHI, Germany), who presented the update in [I‑028](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-028.docx) using the slides in [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-028-A01.pdf). The title of the deliverable is changed from *AI for health evaluation specification* to *AI for health evaluation considerations*.

### DEL07.2: AI technical test specification

The editor is [Auss Abbood](mailto:abbooda@rki.de) (Robert Koch Institute, Germany), who presented the update in [I-027](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-027.docx) using the slides in [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-027-A01.pptx). The objective is to identify best practices and how to test an assessment platform.

### DEL07.3: Data and artificial intelligence assessment methods (DAISAM) reference

The editor of DEL 7.3 is [Luis Oala](mailto:luis.oala@hhi.fraunhofer.de) (Fraunhofer HHI, Germany), who presented the update in [I-035](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-035.docx).

The title of the deliverable is changed from *AI technical test metric specification* to *Data and artificial intelligence assessment methods (DAISAM) reference*.

The deliverable deals with two metrics: data quality and AI model quality. The editor noted and various subsections still have elements /issues that need to be addressed.

### Updates on the preparation of DEL07.4: Clinical evaluation

The editors of DEL7.4 are [Naomi Lee](mailto:naomi.lee@lancet.com), [Rupa Sarkar](mailto:rupa.sarkar@lancet.com) (Lancet, UK), together with [Eva Weicken](mailto:eva.weicken@hhi.fraunhofer.de) (Fraunhofer HHI, Germany) and [Shubs Upadhyay](mailto:shubs.upadhyay@ada.com) (ADA Health, Germany).

Document [I-051](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-051.docx) was introduced by Naomi Lee and describes the initial steps that will lead to the preparation of DEL7.4 on clinical evaluation. Progress has been hindered as the WG-CE was established just at this meeting. The current draft that is being developed is providing an overview of current challenges, and will be shared for comments and inputs for the next FG-AI4H meeting.

## DEL08: AI4H scale-up and adoption

Sameer Pujari presented informed the group that no draft is yet available for this deliverable. Some material was prepared but it needs to be reviewed internally to be aligned with the scope of the FG. Sameer expects to have a draft submitted in time for the next meeting.

## DEL09: AI4H applications and platforms

The editors of DEL9 are [Manjeet Chalga](mailto:chalgams.hq@icmr.gov.in) (ICMR, India), [Aveek De](mailto:aveek@cms-india.org) (CMS, India). Manjeet introduced the latest draft, as found in [I-050](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-050.docx).

The slides in [I-048-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-048-A01.pdf) provided various use cases of mobile and cloud AI4H use cases and the associated work cycle.

Applications should help accessing the last-mile users, and the deliverables indicate some requirements that mobile and cloud applications should meet. It was noted that validation of applications is missing in the document, that major cloud providers follow standards of developed countries; not necessarily adapted to lower resource countries; and that data sharing is not allowed outside jurisdictions.

### DEL09.1: Mobile Applications

The editor of DEL9.1 are [Khondaker Mamun](mailto:mamun@cse.uiu.ac.bd) (UIU, Bangladesh) and [Manjeet Chalga](mailto:chalgams.hq@icmr.gov.in) (ICMR, India). The update in [I-048](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-048.docx) was presented by [Khondaker Mamun](mailto:mamun@cse.uiu.ac.bd) (UIU, Bangladesh), with comments from Manjeet using the slides in [I-048-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-048-A01.pdf).

### DEL09.2: Cloud-based AI applications

The editor of DEL 9.2 is [Khondaker Mamun](mailto:mamun@cse.uiu.ac.bd) (UIU, Bangladesh), who presented the update in [I-049](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-049.docx), using the slides used for DEL91, [I-048-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-048-A01.pdf).

## DEL10: Use cases of the ITU/WHO Focus Group on AI for Health: introduction to the topic description documents

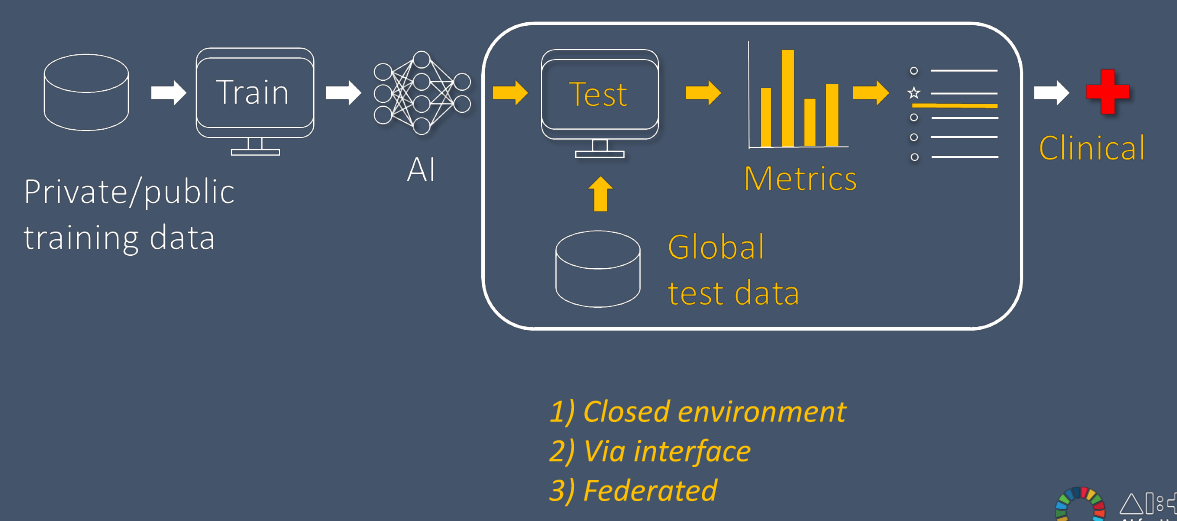
The update of DEL10 in [I-030](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-030.docx) was presented by the editor, [Eva Weicken](mailto:eva.weicken@hhi.fraunhofer.de) (Fraunhofer HHI, Germany) using the slides in [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-030-A01.pptx).

This Deliverable provides a summary of all TDDs, which are part of the documentation of each of the Topic Groups (see §13). The current version updates information as a result of the progress in the various TGs.

# Horizontal and strategic topics

[I-037](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-037.docx): FG-AI4H Assessment Platform [WG Chairs]

Document I-037 was presented by [Luis Oala](mailto:luis.oala@hhi.fraunhofer.de) (Fraunhofer HHI, Germany), who prepared it with Marc Lecoultre and [Steffen Vogler](mailto:steffen.vogler@bayer.com) (Bayer, Germany). It describes the current efforts to implement an assessment platform based on the Evalai open source challenges platform, with the objective to test it for use within the FG-AI4H main activities. It is being customized follow the closed environment example. It is currently being implemented in cloud servers for proof-of-concept.



Next steps: complete configuration in the cloud servers, integrate the questionnaire and then will invite TGs to join and test the platform.

The activity was welcome and some TGs plan on using it.

# Working Group updates

## Data and AI solution assessment methods (WG-DAISAM)

The WG is chaired by [Pat Baird](mailto:pat.baird@philips.com), Philips, USA, assisted by vice-chair, [Luis Oala](mailto:luis.oala@hhi.fraunhofer.de) (Fraunhofer HHI, Germany).

DAISAM activities focused on the progressing of the deliverables and the establishment of the processing platform, as reported elsewhere in this report.

## Data and AI solution handling (WG-DASH)

WG-DASH has [Marc Lecoultre](mailto:ml@mllab.ai) (ML Lab, CH) and chair and [Ferath Kherif](mailto:Ferath.kherif@chuv.ch) (CHUV, CH) as Vice-chair.

DASH activities focused on the progressing of the various deliverables, as reported elsewhere in this report.

## Operations (WG-O)

The WG on operations (WG-O) is co-chaired by [Markus Wenzel](mailto:markus.wenzel@hhi.fraunhofer.de) and [Monique Kuglitsch](mailto:monique.kuglitsch@hhi.fraunhofer.de) (Fraunhofer HHI, Germany).

There was no specific WG-O report at this meeting, although progress was observed in various areas as reported elsewhere in this report, in particular:

* Processing platform
* Onboarding documentation
* TDD template update

[FGAI4H-I-031](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-031.docx) - Proposal for improving the onboarding process for new FG-AI4H members - [Editors]

This document contains a proposal with ideas on improving the onboarding process for new members of the Focus Group on AI for Health. The suggestions for simplifying the onboarding process can be added to the existing "Onboarding document" FGAI4H-G-107, for example as a new chapter "Continuous improvement of the onboarding process". A revised version of the current onboarding document [G-107](https://itu.int/en/ITU-T/focusgroups/ai4h/Documents/ITU_WHO_AI4H_Onboarding.pdf) was not created, however the following proposals were well received and should be implemented. (NOTE – The last one was already implemented, see §10.1.1.)

| No. | Proposals for improving the onboarding process | Where to address / find |
| --- | --- | --- |
| 1 | Improving the website as central information source | [H-031](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-031.docx?d=w692fdcef987946449143caeb01957b74&csf=1&e=ze3wNQ) / ITU |
| 2 | Information: visualization, less text form, for example flow-charts & illustrations | Onboarding document [G-107](https://itu.int/en/ITU-T/focusgroups/ai4h/Documents/ITU_WHO_AI4H_Onboarding.pdf) |
| 3 | History of document structure within the FGAI4H | Onboarding document [G-107](https://itu.int/en/ITU-T/focusgroups/ai4h/Documents/ITU_WHO_AI4H_Onboarding.pdf) |
| 4 | Outline for new topic group drivers | See attachment in [I-031](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-031.docx) |
| 5 | Overview of the structure of the FGAI4H -deliverables, where experts see how to collaborate | Deliverable [DEL00](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL00.docx) |

1. Agreed to further improve the onboarding process by 1) improving the website as central information source ([H-031](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-031.docx?d=w692fdcef987946449143caeb01957b74&csf=1&e=ze3wNQ)); 2) Updating the onboarding document concerning a) Information: visualization, less text form, for example flow-charts & illustrations; b) develop a history of document structure within the FGAI4H; and c) add an outline for new topic group drivers using attachment in [I-031](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-031.docx).

## Ethical considerations on AI for health (WG-Ethics)

[Andreas Reis](mailto:reisa@who.int) (WHO) briefed the meetings on WG-Ethics activities, clarifying that the latest version of the documentation is as in Brasilia, see[H-039-R01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-039-R01.pptx). He reminded the meeting that the WG- Ethics was created in Brasilia, January 2020, with an idea of leveraging the Ethics group in WHO. He explained that the planned activities were disrupted by the COVID-19 pandemic, with the Copenhagen meeting having been cancelled. There were online events on liability questions and ethics connected to the COVID-19, one of them addressed privacy concerns for digital contact tracing (Thomas Wiegand participated), aiming to promote *ethics by design*.

Andreas noted that the WG can help TG Drivers draft the section in their TDDs about ethics. In principle, would need to have some experts on board. He suggested that TDD drivers send requests to him, and Andreas will try to coordinate the response from the ethics group.

## Regulatory considerations on AI for health (WG-RC)

The chair of the WG-RC, Naomi Lee (Lancet, UK), presented the status update in [I-038](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-038.docx) using the slides in [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-038-A01.pptx).

The WG-RC held its first meeting virtually, 4-5 May 2020 with approximately 60 participants from different stakeholder communities. WHO provides secretariat for this WG (Sameer Pujari), which aims to provide reports to guide the development of future WHO Guidelines in the area of software as a medical device (SaMD) regulation.

Participants in this WG are different from the ones in the other more technically minded groups, coming from medical device regulators globally. It was observed that there is a gap on how regulators and developers see things (including early developers of AI applications). Multi-stakeholder involvement is needed, and DEL02 that will be produced by this WG aims to be tool to guide in bridging this gap, e.g. by sharing details of the process leading to the development of regulations and exploring aspects that make AI different from a SaMD (regulation) perspective. It is also clear from the meeting that different countries will have different needs.

The discussions included the outline for the deliverables and topic areas for key regulatory considerations. They had planned a next e-meeting in July 2020 (as reported in [FGAI4H-I-038-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-038-A01.pptx)), however later developments indicate a preference to let their sub-groups further progress work and have a virtual meeting in the September 2020 timeframe.

During the FG-AI4H meeting, the WG-RC chair clarified that the checklist that the WG-DAISAM is developing will be taken into account, and that the WG is working on similar aspects but that do not overlap, as coordination is taking place for the separate workstreams. As discussed in §10.1.2, guidance should be provided for implementers on how to provide data / evidence in a format that is more readily usable by regulators.

## Clinical Evaluation (WG-CE)

[Naomi Lee](mailto:naomi.lee@lancet.com) (The Lancet, UK) reviewed the matter of clinical evaluation while presenting [I-051](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-051.docx) in the context of DEL07.4 (§10.6.3). After discussions, it was considered important that this WG be established, so the meeting agreed to its creation and the development of its terms or reference and approval by correspondence.

1. It was agreed to create the new WG on Clinical Evaluation (WG-CE), with terms of reference to be developed under the coordination of [Naomi Lee](mailto:naomi.lee@lancet.com) (The Lancet, UK) shortly after Meeting I and submitted for comments and approval through the FG-AI4H mailing list.

## New WG on AI and other digital technologies for COVID-19 health emergencies

[I-026](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-026.docx) from [CAICT, PAHO] was introduced by Shan Xu (CAICT, China) using the slides in [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-026-A01.pptx). It proposes the establishment of a WG on the use of AI and other digital technologies for COVID-19 health emergencies that would include the full life cycle of the health emergency and it would complement / reuse / integrate the work done in other groups.

There was support for the idea to create an activity collecting best practices on health emergencies such as COVID-19. However, it was felt better that this not be a WG nor a TG. Also, the link with AI should be made clear so it fits with the mandate of the FG-AI4H; and that it should not be limited to COVID-19, although it could start with it.

In the end, it was agreed to create an ad-hoc group co-led by [Shan Xu](mailto:xushan@caict.ac.cn) (CAICT, China) and [Ana Rivière Cinnamond](mailto:rivierea@paho.org) (PAHO) to collect effective experiences on the use of AI and other digital technologies to combat COVID-19 at the various stages of the emergency. The name and mandate of the AHG would be refined after the meeting in view of the discussions and circulated for approval to the main FG-AI4H mailing list.

NOTE – after the meeting, the AHG name was selected as FG-AI4H ad-hoc group on digital technologies for COVID health emergency. A consultation started on 2020-06-17, for two weeks.

1. Agreed to create an ad-hoc group co-led by [Shan Xu](mailto:xushan@caict.ac.cn) (CAICT, China) and [Ana Rivière Cinnamond](mailto:rivierea@paho.org) (PAHO) to collect effective experiences on the use of AI and other digital technologies to combat COVID-19 at the various stages of the emergency, contingent to confirmation of name and ToR by two-week consultation in the FG-AI4H mailing list.

# Updates and new proposals for existing TGs

The following TGs received no updates at this meeting:

* TG-Cardio (Cardiovascular disease management)  
  Last updates: Meeting H. Proposed at meeting B.
* TG-Bacteria (Diagnoses of bacterial infection and anti-microbial resistance)  
  Last updates: No initial documentation. Proposed at meeting F.
* TG-Derma (Dermatology)   
  Last updates: Meeting E. Proposed at meeting B.
* TG-Falls (Falls among the elderly)   
  Last updates: Meeting H. Proposed at meeting B.
* TG-FakeMed (AI-based detection of falsified medicine)  
  Last updates: CfTGP in meeting F, TDD not yet available. Proposed at meeting F.
* TG-MCH (Maternal and child health)   
  Last updates: Skeleton TDD produced after meeting G. CfTGP not available. Proposed at meeting D, re-started at meeting F, then meeting G.

Various groups have not shown or reported progress and that is a

1. It was agreed to remind TG Drivers that an update of their activities is expected at each FG meeting.

Drivers for the new topic groups are requested to submit at the next meeting a topic description document and call for topic group participation using the current templates:

* [I-105](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-105.docx) (TDD)
* [F-004](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-F-004.docx) (CfTGP)

Further observations concerning TGs with subtopics:

* TG-Cardio: Needs TDD content for subtopic on cardiac image analysis. Current version only covers the cardiovascular risk prevention.
* TG-Neuro: Needs update for subtopic Parkinson's Disease
* TG-Outbreaks: Needs update for subtopic Dengue Surveillance

## Template updates: TDD, CfTGP

[FGAI4H-I-004](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-004.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-004-A01.pptx) - Draft updated TDD template [Editors]

The updated TDD template in I-004 was presented [Eva Weicken](mailto:eva.weicken@hhi.fraunhofer.de) (Fraunhofer HHI, Germany) and accepted. Eva was asked to double-check that the new structure covers all horizontal deliverables (DEL1 to DEL9), and to introduce adjustments if needed. After this check, we would ask the TG Drivers to update their TDDs according to the new structure.

1. It was agreed to issue the updated TDD template as [FGAI4H-I-105](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-105.docx), subject to further editing after comparison for coverage of the theme of the horizontal FG-AI4H deliverable (DEL1 to DEL9).

## TG-Cardio (Cardiovascular Risk Prediction)

The Topic Driver is [Benjamin Muthambi](mailto:brm5@caa.columbia.edu). The latest documentation available is as follows:

TDD: [I-006-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-006-A01.docx) (Same as meeting H)  
CfTGP: [I-006-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-006-A02.docx) (Same as meeting H)  
Contributions: N/A

No progress report was presented.

## TG-Derma (Dermatology)

The Topic Driver is [Maria Vasconcelos](mailto:maria.vasconcelos@fraunhofer.pt). The latest documentation available is as follows:

TDD: [I-007-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-007-A01.docx) (Same as meeting E)  
CfTGP: [I-007-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-007-A02.docx) (Same as meeting E)  
Contributions: N/A

No progress report was presented.

## TG-Bacteria (Diagnoses of bacterial infection and anti-microbial resistance - AMR)

The Topic Driver is [Nada Malou](mailto:nada.malou@paris.msf.org). The latest documentation available is as follows:

TDD: N/A  
CfTGP: N/A  
Contributions: N/A

No progress report was presented.

The TG Driver communicated with [Eva Weicken](mailto:eva.weicken@hhi.fraunhofer.de), informing that she has been indispensable, and was now returning to work. Documentation should be produced soon. (NB – None was received during the meeting.)

## TG-DiagnosticCT (Volumetric chest computed tomography)

The Topic Driver is [Kuan Chen](mailto:ckuan@infervision.com). The latest documentation available is as follows:

TDD: [I-009-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-009-A01.docx)  
CfTGP: [I-009-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-009-A02.docx) (Same as meeting H)  
Contributions: N/A

An update was provided. A topic of interest is how entities can get access to data for model training purposes. In China, it is normally done through agreement with data owners/aggregators, e.g. hospitals.

## TG-Dental (Dental diagnostics and digital dentistry)

The Topic Drivers are [Falk Schwendicke](mailto:falk.schwendicke@charite.de) and [Joachim Krois](mailto:Joachim.krois@charite.de). The latest available documentation is:

TDD: [I-010-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-010-A01.docx) - [I-010-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-010-A03.pptx)  
CfTGP: [[I-010-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-010-A02.docx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-010-A02.docx)Contributions: [I-042](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-042.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-042-A01.pptx)

The TG Drivers reported that work has progressed and the next steps include improvement of the TDD, prepare an article series in the SPIRIT/CONSORT AI reporting on the TG-Dental work, prepare a checklist/narrative review, and organize an interinstitutional experiment series on AI for dental image analysis.

[FGAI4H-I-042](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-042.docx) TG-Dental: Artificial intelligence for dental image analysis: A guide for authors and reviewers [TG-Dental Topic Driver]

The number of studies employing artificial intelligence (AI), specifically machine and deep learning, for dental image analysis, is growing fast. The majority of studies shows weaknesses in planning, implementation and reporting, which in turn results in limited robustness and applicability. This document proposed the development of a process to establish a *living, non-authoritative guidance* for authors and reviewers on the *conception, implementation and reporting of studies on dental image analysis* under the roof of the TG-Dental in the ITU/WHO Focus Group on AI for Health. The proposal was supported by the meeting and the TG-Dental drivers will pursue its implementation.

## TG-FakeMed: AI-based detection of falsified medicine

The Topic Driver is [Franck Verzefé](mailto:fverzefe@gmail.com). The latest documentation available is as follows:

TDD: N/A  
CfTGP: [[I-011-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-011-A02.docx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-011-A02.docx) (Same as meeting H)  
Contributions: N/A

No progress report was presented.

The TG Driver e-mailed that he could not join the meeting for health reasons and that he would submit a TDD. (NB – None was received during the meeting.)

## TG-Falls (Falls among the elderly)

The Topic Driver is [Inês Sousa](mailto:ines.sousa@fraunhofer.pt). The latest documentation available is as follows:

TDD: [I-012-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-012-A01.docx) (Same as meeting H)  
CfTGP: [I-012-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-012-A02.docx) (Same as meeting H)  
Contributions: N/A

No progress report was presented.

## TG-Histo (Histopathology)

The Topic Driver is [Frederick Klauschen](mailto:frederick.klauschen@charite.de). The latest documentation available is as follows:

TDD: [I-013-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-013-A01.docx)  
CfTGP: [I-013-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-013-A02.docx) (Same as meeting E)  
Contributions: N/A

A progress report was presented and progress is on track.

## TG-Malaria: Malaria detection

The Topic Driver is [Rose Nakasi](mailto:g.nakasirose@gmail.com). The latest documentation available is as follows:

TDD: [I-014-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-014-A01.docx) - [[I-014-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-014-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-014-A03.pptx)CfTGP: [[I-014-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-014-A02.docx) (Same as meeting H)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-014-A02.docx)Contributions: N/A

A progress report was presented and progress is on track.

It was reported that FIND joined the TG and will bring experts on the AI and medical fields. A prototype was developed in the CodaLab.

## TG-MCH: Maternal and child health

The Topic Drivers are [Raghu Dharmaraju](mailto:rdharmaraju@gmail.com) (Wadhwani AI, India) and [Alexandre Chiavegatto Filho](mailto:alexdiasporto@usp.br) (University of São Paulo, Brazil).The latest documentation available is as follows:

TDD: [I-015-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-015-A01.docx) (Same as meeting H)  
CfTGP: [I-015-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-015-A02.docx) (Same as meeting H)  
Contributions: N/A

No progress report was presented. Alexandre informed Eva that an update will be provided at the next meeting.

## TG-Neuro: Neurological disorders

The Topic Driver is [Marc Lecoultre](mailto:ml@mllab.ai). The latest documentation available is as follows:

TDD: [I-016-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-016-A01.docx)  
CfTGP: [I-016-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-016-A02.docx) (Same as meeting E)  
Contributions: N/A

## TG-Ophthalmo (Ophthalmology)

The Topic Driver is [Arun Shroff](mailto:arunshroff@gmail.com). The latest documentation available is as follows:

TDD: [I-017-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-017-A01.docx) - [I-017-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-017-A03.pptx)  
CfTGP: [I-017-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-017-A02.docx)  
Contributions: [I-040](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-040.docx) & [I-041](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-041.docx) [Tencent Healthcare]

[FGAI4H-I-040](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-040.docx) TG-Ophthalmo: Data set construction and annotation of artificial intelligence assisted screening system based on fundus image [Tencent Healthcare (China)]

[FGAI4H-I-041](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-041.docx) TG-Ophthalmo: Evaluation method and index of artificial intelligence glaucoma assisted screening system based on fundus image [Tencent Healthcare (China)]

Abstract: Both proposals are in the context of FG-Ophthalmo is to provide a brief introduction of the definition, importance, procedure, requirements of data set construction and annotation in artificial intelligence assisted screening system based on fundus image.

It was noted that mismatch in performance may occur because a model is trained with hi resolution images and that correspond to the application situation in the field. Algorithms must be trained with the data from the actual equip to be used in the field.

The proposal was welcomed, and [Jianrong Wu](mailto:edwinjrwu@tencent.com) (Tencent Healthcare, China) agreed to join the TG‑Ophthalmo work.

## TG-Outbreaks (AI for Outbreak Detection)

The Topic Driver is [Stéphane Ghozzi](mailto:GhozziS@rki.de). The latest documentation available is as follows:

TDD: [I-018-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-018-A01.docx) - [I-018-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-018-A03.pptx)  
CfTGP: [I-018-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-018-A02.docx)  
Contributions: N/A

A progress report was presented and progress is on track.

## TG-Psy (Psychiatry)

The Topic Driver is [Nicholas Langer](mailto:n.langer@psychologie.uzh.ch). The latest documentation available is as follows:

TDD: [I-019-A01-R01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-019-A01-R01.docx) - [I-019-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-019-A03.pptx)  
CfTGP: [I-019-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-019-A02.docx) (Same as meeting H)  
Contributions: N/A

A progress report was presented and progress is on track.

## TG-Snake (Snakebite and snake identification)

The Topic Driver is [Rafael Ruiz](mailto:rafael.ruizdecastaneda@unige.ch). The latest documentation available is as follows:

TDD: [I-020-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-020-A01.docx) - [I-020-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-020-A03.pptx)  
CfTGP: [I-020-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-020-A02.docx) (Same as meeting G)  
Contributions: N/A

A progress report was presented and progress is on track.

## TG-Symptom (Symptom assessment)

The Topic Driver is [Henry Hoffmann](mailto:henry.hoffmann@ada.com). The latest documentation available is as follows:

TDD: [I-021-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-021-A01.docx) - [[I-021-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-021-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-021-A03.pptx)CfTGP: [[I-021-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-021-A02.docx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-021-A02.docx)Contributions: N/A

A progress report was presented and progress is on track.

## TG-TB (Tuberculosis)

The Topic Driver is [Manjula Singh](mailto:drmanjulasb@gmail.com). The latest documentation available is as follows:

TDD: [I-022-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-022-A01.docx) - [I-022-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-022-A03.pptx)  
CfTGP: [I-022-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-022-A02.docx) (Same as meeting E)  
Contributions: N/A

A progress report was presented and progress is on track.

## TG-Radiology (Radiology)

The Topic Driver is [Darlington Ahiale Akogo](mailto:darlington@gudra-studio.com). The latest documentation available is as follows:

TDD: [I-023-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-023-A01.docx) - [I-023-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-023-A03.pptx)  
CfTGP: N/A  
Contributions: N/A

The TG Driver informed that the TG has increased its network, many experts have interest in the area: with 17 participants from five continents from companies building AI systems.

Next steps include additional metrics and scores, define the AI input and output data structure. An interim meeting of the TG-Radiology was planned for the end of May 2020.

A general comment made was that accuracy should be mapped to *local professionals*, not necessarily to a global golden standard.

## TG-Diabetes

The Topic Driver is [Andrés Valdivieso](mailto:avaldivieso@anastasia.ai). The latest documentation available is as follows:

TDD: [I-024-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-024-A01.docx) - [I-024-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-024-A03.pptx)  
CfTGP: N/A  
Contributions: N/A

The TG Driver informed that the TG work has started, and the next steps are to coop new contributors under the different work areas, and validate the approach and techniques for each category and part of the AI tool processes (e.g., data upload, training and prediction).

# Proposals for new topic areas

## Proposal for new topic group: Endoscopy

[I-039](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-039.docx) – Proposal for new topic group: Endoscopy [Tencent Healthcare (China)]

Summary: This proposed new topic aims to improve the existing endoscope-based solution and the usage of Artificial Intelligence. Currently the endoscopy is lack of evaluation criteria and benchmarking. This document provides details on the data annotation and test data. Illuminate the endoscopy screening assisted diagnosis system based on artificial intelligence. Proposing an endoscopy screening platform and data annotation framework allow any artificial intelligence endoscopy solution to be assessed.

This use case addresses the use of video-based application for AI benchmarking, instead of still images. Consequently, it has peculiar benchmarking requirement. Annotation is made for the whole video, as detection is done in real time.

The proponents have used open datasets from more than four hospitals in Norway and the tools is used for the practice in China.

It was noted that the TG should be open to other types of endoscopy.

After discussion, there was support for the creation of a new topic group on endoscopy (TG-Endoscopy). The topic driver will be [Jianrong Wu](mailto:edwinjrwu@tencent.com), Tencent Healthcare, China.

A TG page was created in the FG-AI4H collaboration site, <https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/tg/SitePages/TG-Endoscopy.aspx>.

1. Agreed to create a new Topic Group on endoscopy (TG-Endoscopy), with [Jianrong Wu](mailto:edwinjrwu@tencent.com) (Tencent Healthcare, China) as Topic Driver.

# Review / reconfirmation of previous output documents

The list of current output documents was reviewed, as follows.

Updates needed or agreed:

* The [FG-AI4H Whitepaper](https://www.itu.int/en/ITU-T/focusgroups/ai4h/Documents/FG-AI4H_Whitepaper.pdf) is outdated. [Monique Kuglitsch](mailto:monique.kuglitsch@hhi.fraunhofer.de) (Fraunhofer HHI, Germany) volunteered to lead an editing team to update the document and include it in the set of deliverables to SG16 at iits meeting in June-July 2020.
* The call for proposals: use cases, benchmarking, and data in [H-102-R01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-102-R01.docx) needs only the usual updates (venue, dates) and it will be issued as [I-102](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-102.docx) as soon as the date of the next meeting is defined.
* TDD Template in [C-105](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-C-105.docx) is superseded by [I-105](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-105.docx) (see §13.1)

The **Onboarding document** in [G-107](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-G-107.docx) is kept as is for now, but it should be updated as needs to be updated as per §12.3 discussions / Dec-I-8 and amended to clarify how to get open source community involved for the annotation tool.

The following documents are reconfirmed without any updates:

* [F-103](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-F-103.docx): Updated FG-AI4H data acceptance and handling policy
* [C-104](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-C-104.docx): Thematic classification scheme
* [F-105](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-F-105.docx): ToRs for the WG-Experts and call for experts
* [F-106](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-F-106.docx): Guidelines on FG-AI4H online collaboration tools
* [F-004](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-F-004.docx): CfTGP Templates

# Working methods

No changes were agreed to the working methods, and no new mailing lists were created.

NOTE – Annex [D](#AnnexD) hereinafter contains the agreed procedures for online approval of document as well as for organizing e-meetings.

# Outcomes of this meeting

## WG updates

* WG on Clinical Evaluation, subject to the clarification of its terms of reference and approval by the remote consensus via the FG-AI4H mailing list. Naomi Lee (Lancet, UK) will lead the group.
* Agreed to launch an ad hoc group ad-hoc group on digital technologies for COVID health emergency, coordinated by [Shan Xu](mailto:xushan@caict.ac.cn) (CAICT, China) and [Ana Rivière Cinnamond](mailto:rivierea@paho.org), PAHO/WHO. The ToR will be circulated for remote consensus two-week consultation and approval via the FG-AI4H mailing list.

## TG updates

New TG/sub-TG:

* New TG on Endoscopy (TG-Endoscopy) with [Jianrong Wu](mailto:edwinjrwu@tencent.com) (Tencent Healthcare, China) as Topic Driver. The collaboration site for the new TG is <https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/tg/SitePages/TG-Endoscopy.aspx>.

Leadership / scope updates:

* None.

## Output liaison statements

No OLSs would be prepared. The FG-AI4H management will consider the best way (LS or TD) to convey the deliverable snapshot to SG16.

## Output documents

The following updated output documents were agreed:

* [I-102](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-102.docx): Updated call for proposals: use cases, benchmarking, and data (to be published once the final dates of the next FG-AI4H meeting are defined)
* [I-105](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-004.docx): Updated TDD Template
* [I-200](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-200.docx): Updated list of FG-AI4H deliverables
* [FG-AI4H whitepaper](https://www.itu.int/en/ITU-T/focusgroups/ai4h/Documents/FG-AI4H_Whitepaper.pdf)

## Deliverables and parent group reporting

* New DEL00: "Overview of the FG-AI4H deliverables" with Shan Xu (CAICT, China) as editor. The initial draft is found in [I-211](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-211.docx). Title changes for DEL7 and DEL7.3.
* All available deliverables were reviewed and will be shared with SG16. The latest version of the deliverables is found in the [FG-AI4H collaboration site](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/SitePages/Deliverables.aspx).

Agreed to prepare a report to ITU-T SG16 at its virtual meeting, 22 June – 3 July 2020 including:

* Most recent results (New Delhi, Brasilia and Virtual meetings), including the current deliverables plus the updated whitepaper
* Request to renew the lifetime of the FG-AI4H for another two years (until September 2022)

# Future work

## Schedule of future FG meetings and workshops

The schedule of meetings in [I-003](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-003.docx) was reviewed and updated as found in its [Rev.1](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-003-R01.docx); see Table 2 for easier reference.

Table 2– Schedule of future FG meetings (as of 2020-05-08)

| Meeting | Date | Venue | Notes |
| --- | --- | --- | --- |
| J | [13-17] July 2020\* | Virtual meeting | TBD |
| K | 1-4 September 2020 | TBD | TBD |
| L | 17-20 November 2020 | TBD | TBC |

\* After the FG-AI4H meeting, in view of a number of parallel meetings and the short time to further progress the work in view of the vacations period, it was decided to postpone meeting J to September 2020, dates TBD. Subsequent meetings would be shifted accordingly.

The following is a list of potential future meeting locations:

|  |  |  |
| --- | --- | --- |
| Asia:   1. Bangladesh 2. Philippines 3. Singapore 4. South Korea 5. Thailand   Middle-East   1. Oman 2. UAE | Africa   1. South Africa 2. Uganda 3. Kenya 4. Ghana 5. Rwanda 6. Nigeria   Europe   1. Berlin | Americas   1. Canada 2. US 3. Chile |

## Work plan and timeline

Update drafts of the deliverables in Table 1 (see §9) are expected to be available by 2 June 2020.

## Interim activities (online)

TGs and WGs will continue their activities between this and the next FG meeting. Communications on planned e-meetings will be announced in the TG-specific and/or general mailing lists (see Annex [D](#AnnexD)) with at least one-week notice.

# Promotion and outreach

None was mentioned beyond the need to update the outreach document by the FG (§12.3) and the need to include the open source community (recorded in §20).

# A.O.B.

On the more general topic of **open source**, it was noted that many open source tools exist and that this information could be collected and made available to the FG members. Where tools lack, it would be desirable to build an FG-AI4H software repository for the tools that the FG-AI4H might develop. Some funding opportunities also exist for open source development in the biomedical field, e.g. [CZI's Essential Open Source Software for Science program](https://chanzuckerberg.com/newsroom/chan-zuckerberg-initiative-awards-5-million-for-open-source-software-projects-essential-to-science/).

1. It was agreed to develop a compile a collection of open source tools. Suggestions should be e-mailed to the secretariat, who will curate a list.

# Closing

The FG-AI4H chairman thanked PAHO for hosting the meeting and the dedication of the staff for the excellent facilities and arrangements provided for a smooth and efficient meeting. He thanked all participants for having come to the meeting, in particular those submitting contributions and engaged in the discussions. The chairman also thanked the vice-chairs, WG chairs/co-/vice-chairs, and topic drivers who joined the discussions. Finally, he expressed his appreciation for the essential work performed by the secretariat, in particular Simão Campos, Bastiaan Quast, Ayda Dabiri and Kaoru Mizuno.

The meeting was closed on Fri 8 May 2020 around 1800 hours (Geneva time).

Annex A  
Agenda

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | Related Documents |
| 1 | Opening | | |  |
| 2 | Approval of agenda | | | [I-001](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-001.docx) (Agenda);  Initial timing: Annex [Annex CAnnex CAnnex CC](#AnnexC) |
| 3 | Documentation and allocation | | | [I-001](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-001.docx) (Allocation);  Annex [B](#AnnexB) (Documentation) |
| 4 | IPR | | | Annex [A](#AnnexA) |
| 5 | Management updates | | |  |
| a | | | Vice-chairs |  |
| b | | | WGs |  |
| 6 | Approval of Meeting H outcomes and updates | | | [H-101-R01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-101-R01.docx): Meeting Report  [H-102-R01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-102-r01.docx): Updated call for Proposals: use cases, benchmarking, and data  [H-200-R01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-200-R01.docx): Updated list of FG-AI4H deliverables |
| 7 | Information on AI-related activities | | | [I-002](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-002.pptx): Information on AI/ML challenge |
| 8 | Review of incoming LSs | | |  |
| a | | | ITU-T SG17 | [I-025](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-025.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-025-A01.docx) |
| b | | | Others? |  |
| 9 | FG-AI4H deliverables | | | [I-005](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-005.docx): Updated list of FG-AI4H deliverables (as of 2020-05-07) [TSB] |
| a | | | DEL00: New overview deliverable | [I-029-R03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-029-R03.docx) [CAICT] |
| b | | | DEL02: Outline Describing Suggested Topics for the Regulatory Considerations on AI for Health | [I-038](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-038.docx" \t "_blank) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-038-A01.pptx) [Editors] |
| c | | | DEL02.2: Guidelines for AI based medical device: Regulatory requirements (Draft: April 2020) | [I-036](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-036.docx" \t "_blank) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-036-A01.pptx) [Editors] |
| d | | | DEL03: AI4H requirements specifications | [I-033](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-033.docx" \t "_blank) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-033-A01.pptx) [Editors] |
| e | | | DEL05.1: Data requirements | [I-044](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-044.docx) [Editor] |
| f | | | DEL05.3: Data specification | [I-043-R01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-043-R01.docx) [Editor] |
| g | | | DEL05.5: Data handling | [I-045](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-045.docx) [Editor] |
| h | | | DEL05.4: Training and test data specification | [I-034](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-034.docx" \t "_blank) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-034-A01.pptx) [Editors] |
| i | | | DEL05.6: Data sharing practices | [I-046](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-046.docx) [Editors] |
| j | | | DEL05.x: Annotation tool - Draft requirements study | [I-047](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-047.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-047-A01.pptx) [Editor] |
| k | | | DEL06: AI Training Best Practices Specification | [I-032](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-032.docx" \t "_blank) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-032-A01.pptx) [Editors] |
| l | | | DEL07: AI for Health Evaluation Considerations | [I-028](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-028.docx" \t "_blank) [Editors] |
| m | | | DEL07.2: AI Technical Test Specification | [I-027](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-027.docx" \t "_blank) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-027-A01.pptx) [Editors] |
| n | | | DEL07.3: Data and Artificial Intelligence Assessment Methods (DAISAM) Reference | [I-035](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-035.docx" \t "_blank) [Editors] |
| o | | | Updates on the preparation of DEL07.4: Clinical Evaluation | [I-051](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-051.pptx) [Editors] |
| p | | | DEL09: AI4H applications and platforms | [I-050](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-050.docx) [Editors] |
| q | | | DEL09.1: Mobile Applications | [I-048](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-048.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-048-A01.pdf) [Editors] |
| r | | | DEL09.2: Cloud-based AI applications | [I-049](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-049.docx) [Editors] |
| s | | | DEL10: Use cases of the ITU/WHO Focus Group on AI for Health: introduction to the topic description documents | [I-030](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-030.docx" \t "_blank) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-030-A01.pptx) [Editor] |
| t | | |  |  |
|  | | | **NOTE – No updates for:**   * DEL7.1 (AI4H evaluation process description; [Sheng Wu](mailto:wus@who.int), WHO) * DEL4 (AI software life cycle specification, [Pat Baird](mailto:pat.baird@philips.com), Philips, USA) |  |
| 10 | Working Group updates | | |  |
| a | | | Data and AI solution assessment methods (WG-DAISAM) [Pat Baird; Luis Oala] |  |
| b | | | Data and AI solution handling (WG-DASH) [Marc Lecoultre; Ferath Kherif] |  |
| c | | | Ethics (WG-Ethics) [Andreas Reis] |  |
| d | | | Operations (WG-O) [Markus Wenzel/Monique Kuglitsch] |  |
| e | | | Regulatory considerations (WG-RC) [Naomi Lee] | [I-038](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-038.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-038-A01.pptx) |
| f | | | Clinical Evaluation (WG-CE) [Naomi Lee] | [I-051](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-051.pptx) |
| g | | | New WG on AI and other digital technologies for COVID-19 health emergencies | [I-026](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-026.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-026-A01.pptx) - Proposal to set up an ad-hoc working group on AI and other digital technologies for COVID-19 health emergency (WG-WE) [CAICT, PAHO] |
| 11 | Horizontal and strategic topics | | | [I-037](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-037.docx): FG-AI4H Assessment Platform [WG Chairs] |
| 12 | Updates to TGs and new proposals | | |  |
| a | | Template updates: TDD, CfTGP | | [FGAI4H-I-004](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-004.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-004-A01.pptx) - Draft updated TDD template [Editors] |
| b | | TG-Cardio (Cardiovascular Risk Prediction)  [[Benjamin Muthambi](mailto:brm5@caa.columbia.edu)] | | TDD: [I-006-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-006-A01.docx) - [[I-006-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-006-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006-A03.pptx) CfTGP: [I-006-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-006-A02.docx)  Contributions: |
| c | | TG-Derma (Dermatology)  [[Maria Vasconcelos](mailto:maria.vasconcelos@fraunhofer.pt)] | | TDD: [I-007-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-007-A01.docx) - [I-007-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-007-A03.pptx) CfTGP: [I-007-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-007-A02.docx) Contributions: |
| d | | TG-Bacteria (Diagnoses of bacterial infection and anti-microbial resistance - AMR) [[Nada Malou](mailto:nada.malou@paris.msf.org)] | | TDD: [I-008-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-008-A01.docx) - [I-008-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-008-A03.pptx) CfTGP: [I-008-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-008-A02.docx) Contributions: |
| e | | TG-DiagnosticCT (Volumetric chest computed tomography)  [[Kuan Chen](mailto:ckuan@infervision.com)] | | TDD: [I-009-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-009-A01.docx) - [I-009-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-009-A03.pptx) CfTGP: [I-009-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-009-A02.docx) Contributions: |
| f | | TG-Dental (Dental diagnostics and digital dentistry) [[Falk Schwendicke](mailto:falk.schwendicke@charite.de), [Joachim Krois](mailto:Joachim.krois@charite.de)] | | TDD: [I-010-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-010-A01.docx) - [I-010-A03-R01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-010-A03-R01.pptx) CfTGP: [[I-010-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-010-A02.docx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-010-A02.docx) Contributions: [I-042](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-042.docx" \t "_blank) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-042-A01.pptx) |
| g | | TG-FakeMed: AI-based detection of falsified medicine [[Franck Verzefé](mailto:fverzefe@gmail.com)] | | TDD: [I-011-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-011-A01.docx) - [[I-012-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-012-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-011-A03.pptx) CfTGP: [[I-011-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-011-A02.docx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-011-A02.docx) Contributions: |
| h | | TG-Falls (Falls among the elderly)  [[Inês Sousa](mailto:ines.sousa@fraunhofer.pt)] | | TDD: [I-012-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-012-A01.docx)- [I-012-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-012-A03.pptx) CfTGP: [I-012-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-012-A02.docx) Contributions: |
| i | | TG-Histo (Histopathology)  [[Frederick Klauschen](mailto:frederick.klauschen@charite.de)] | | TDD: [I-013-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-013-A01.docx) - [I-013-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-013-A03.pptx) CfTGP: [I-013-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-013-A02.docx) Contributions: |
| j | | TG-Malaria: Malaria detection [[Rose Nakasi](mailto:g.nakasirose@gmail.com)] | | TDD: [I-014-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-014-A01.docx) - [[I-014-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-014-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-014-A03.pptx) CfTGP: [[I-014-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-014-A02.docx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-014-A02.docx) Contributions: |
| k | | TG-MCH: Maternal and child health [[Raghu Dharmaraju](mailto:rdharmaraju@gmail.com), [Hafsa M. Mitwa](mailto:hafsa.m.mwita@gmail.com)] | | TDD: [I-015-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-015-A01.docx) - [I-015-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-015-A03.pptx) CfTGP: [I-015-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-015-A02.docx) Contributions: |
| l | | TG-Neuro: Neurological disorders [[Marc Lecoultre](mailto:ml@mllab.ai)] | | TDD: [I-016-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-016-A01.docx) - [I-016-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-016-A03.pptx) CfTGP: [I-016-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-016-A02.docx) Contributions: |
| m | | TG-Ophthalmo (Ophthalmology)  [[Arun Shroff](mailto:arunshroff@gmail.com)] | | TDD: [I-017-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-017-A01.docx) - [I-017-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-017-A03.pptx) CfTGP: [I-017-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-017-A02.docx) Contributions: [I-040](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-040.docx" \t "_blank) & [I-041](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-041.docx" \t "_blank) [Tencent Healthcare] |
| n | | TG-Outbreaks (AI for Outbreak Detection) [[Stéphane Ghozzi](mailto:GhozziS@rki.de)] | | TDD: [I-018-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-018-A01.docx) - [I-018-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-018-A03.pptx) CfTGP: [I-018-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-018-A02.docx) Contributions: |
| o | | TG-Psy (Psychiatry)  [[Nicholas Langer](mailto:n.langer@psychologie.uzh.ch)] | | TDD: [I-019-A01-R01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-019-A01-R01.docx) - [I-019-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-019-A03.pptx) CfTGP: [I-019-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-019-A02.docx) Contributions: |
| p | | TG-Snake (Snakebite and snake identification)  [[Rafael Ruiz](mailto:rafael.ruizdecastaneda@unige.ch)] | | TDD: [I-020-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-020-A01.docx) - [I-020-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-020-A03.pptx) CfTGP: [I-020-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-020-A02.docx) Contributions: |
| q | | TG-Symptom (Symptom assessment)  [[Henry Hoffmann](mailto:henry.hoffmann@ada.com)] | | TDD: [I-021-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-021-A01.docx) - [[I-021-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-021-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-021-A03.pptx) CfTGP: [[I-021-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-021-A02.docx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-021-A02.docx) Contributions: |
| r | | TG-TB (Tuberculosis)  [[Manjula Singh](mailto:drmanjulasb@gmail.com)] | | TDD: [I-022-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-022-A01.docx) - [I-022-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-022-A03.pptx) CfTGP: [I-022-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-022-A02.docx) Contributions: |
| s | | TG-Radiology (Radiology)  [[Darlington Ahiale Akogo](mailto:darlington@gudra-studio.com)] | | TDD: [I-023-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-023-A01.docx) - [I-023-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-023-A03.pptx) CfTGP: [I-023-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-023-A02.docx) Contributions: |
| t | | TG-Diabetes  [[Andrés Valdivieso](mailto:avaldivieso@anastasia.ai)] | | TDD: [I-024-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-024-A01.docx) - [I-024-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-024-A03.pptx) CfTGP: [I-024-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-024-A02.docx) Contributions: |
| 13 | Proposals for new topic areas | | |  |
| a | | Proposal for new topic group: Endoscopy [Tencent Healthcare (China)] | | [I-039](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-039.docx) |
| b | | Others? | |  |
|  | |  | |  |
|  | |  | |  |
| 14 | Review / reconfirmation of previous output documents | | | [FG-AI4H Whitepaper](https://www.itu.int/en/ITU-T/focusgroups/ai4h/Documents/FG-AI4H_Whitepaper.pdf)  [H-102-R01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-102-R01.docx): Updated call for proposals: use cases, benchmarking, and data  [F-103](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-F-103.docx): Updated FG-AI4H data acceptance and handling policy  [C-104](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-C-104.docx): Thematic classification scheme  [F-105](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-F-105.docx): ToRs for the WG-Experts and call for experts  [F-106](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-F-106.docx): Guidelines on FG-AI4H online collaboration tools  [G-107](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-G-107.docx): Onboarding document  Others? |
| 15 | Outcomes of this meeting | | | a) Outgoing liaison statements  b) Structure updates  New TG-Endoscopy  [TG/WG Health emergencies/COVID?]  c) Call for proposals  d) Output documents  [[I-004](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-004.docx)🡪] I-105 - Updated TDD Template  e) Updated list of planned deliverables |
| 16 | Future work | | |  |
| a | | Schedule of future FG meetings and workshops | | [I-003-R01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-003-R01.docx) |
| b | | Format of the September meeting | |  |
| c | | Work plan and timeline | |  |
| d | | Interim activities (online) | |  |
| e | | Extension of the FG | |  |
| 17 | Promotion and outreach | | | [I-031](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-031.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-030-A01.pptx) [Editors] – Proposal for improving the onboarding process for new FG-AI4H members |
| a | | Promotional activities | |  |
| b | | Press communication | |  |
| c | | Funding and partnerships | |  |
| 18 | A.O.B. | | |  |
| 19 | Closing | | |  |

Annex B:  
Documentation

| Name | Title | | | Source | Note |
| --- | --- | --- | --- | --- | --- |
| [FGAI4H-I-001](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-001.docx) | Agenda of the 9th meeting (Meeting I) of the Focus Group on Artificial Intelligence for Health (FG-AI4H) | | | Chairman FG-AI4H |  |
| [FGAI4H-I-002](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-002.pptx) | Information on AI/ML challenge | | | TSB |  |
| [FGAI4H-I-003](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-003.docx) | Schedule of future FG meetings (as of 2020-05-07) | | | Chairman FG-AI4H |  |
| [FGAI4H-I-004](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-004.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-004-A01.pptx) | Draft updated TDD template | | | TSB |  |
| [FGAI4H-I-005](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-005.docx) | Updated list of FG-AI4H deliverables (as of 2020-05-07) | | | TSB |  |
| [FGAI4H-I-006](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-006.docx) | Updates for Cardiovascular disease risk prediction (TG-Cardio) | | | TG-Cardio Topic Driver |  |
| [FGAI4H-I-006-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-006-A01.docx) | | Att.1 – TDD update (TG-Cardio) | |  |  |
| [FGAI4H-I-006-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-006-A02.docx) | | Att.2 – CfTGP (TG-Cardio) | |  |  |
| [FGAI4H-I-006-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-006-A03.pptx) | | Att.3 – Presentation (TG-Cardio) | |  |  |
| [FGAI4H-I-007](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-007.docx) | Updates for Dermatology (TG-Derma) | | | TG-Derma Topic Driver |  |
| [FGAI4H-I-007-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-007-A01.docx) | | Att.1 – TDD update (TG-Derma) | |  |  |
| [FGAI4H-I-007-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-007-A02.docx) | | Att.2 – CfTGP (TG-Derma) | |  |  |
| [FGAI4H-I-007-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-007-A03.pptx) | | Att.3 – Presentation (TG-Derma) | |  |  |
| [FGAI4H-I-008](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-008.docx) | Updates for Diagnosis of bacterial infection and anti-microbial resistance (TG-Bacteria) | | | TG-Bacteria Topic Driver |  |
| [FGAI4H-I-008-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-008-A01.docx) | | Att.1 – TDD update (TG-Bacteria) | |  |  |
| [FGAI4H-I-008-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-008-A02.docx) | | Att.2 – CfTGP (TG-Bacteria) | |  |  |
| [FGAI4H-I-008-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-008-A03.pptx) | | Att.3 – Presentation (TG-Bacteria) | |  |  |
| [FGAI4H-I-009](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-009.docx) | Updates for Volumetric chest CT (TG-DiagnosticCT) | | | TG-DiagnosticCT Topic Driver |  |
| [FGAI4H-I-009-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-009-A01.docx) | | Att.1 – TDD update (TG-DiagnosticCT) | |  |  |
| [FGAI4H-I-009-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-009-A02.docx) | | Att.2 – CfTGP (TG-DiagnosticCT) | |  |  |
| [FGAI4H-I-009-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-009-A03.pptx) | | Att.3 – Presentation (TG-DiagnosticCT) | |  |  |
| [FGAI4H-I-010](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-010.docx) | Updates for Dental diagnostics and digital dentistry (TG-Dental) | | | TG-Dental Topic Driver |  |
| [FGAI4H-I-010-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-010-A01.docx) | | Att.1 – TDD update (TG-Dental) | |  |  |
| [FGAI4H-I-010-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-010-A02.docx) | | Att.2 – CfTGP (TG-Dental) | |  |  |
| [FGAI4H-I-010-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-010-A03.pptx) | | Att.3 – Presentation (TG-Dental) | |  |  |
| [FGAI4H-I-011](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-011.docx) | Updates for falsified medicine (TG-FakeMed) | | | TG-FakeMed Topic Driver |  |
| [FGAI4H-I-011-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-011-A01.docx) | | Att.1 – TDD update (TG-FakeMed) | |  |  |
| [FGAI4H-I-011-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-011-A02.docx) | | Att.2 – CfTGP (TG-FakeMed) | |  |  |
| [FGAI4H-I-011-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-011-A03.pptx) | | Att.3 – Presentation (TG-FakeMed) | |  |  |
| [FGAI4H-I-012](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-012.docx) | Updates for Falls among the elderly (TG-Falls) | | | TG-Falls Topic Driver |  |
| [FGAI4H-I-012-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-012-A01.docx) | | Att.1 – TDD update (TG-Falls) | |  |  |
| [FGAI4H-I-012-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-012-A02.docx) | | Att.2 – CfTGP (TG-Falls) | |  |  |
| [FGAI4H-I-012-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-012-A03.pptx) | | Att.3 – Presentation (TG-Falls) | |  |  |
| [FGAI4H-I-013](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-013.docx) | Updates for Histopathology (TG-Histo) | | | TG-Histo Topic Driver |  |
| [FGAI4H-I-013-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-013-A01.docx) | | Att.1 – TDD update (TG-Histo) | |  |  |
| [FGAI4H-I-013-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-013-A02.docx) | | Att.2 – CfTGP (TG-Histo) | |  |  |
| [FGAI4H-I-013-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-013-A03.pptx) | | Att.3 – Presentation (TG-Histo) | |  |  |
| [FGAI4H-I-014](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-014.docx) | Updates for Malaria detection (TG-Malaria) | | | TG-Malaria Topic Driver |  |
| [FGAI4H-I-014-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-014-A01.docx) | | Att.1 – TDD update (TG-Malaria) | |  |  |
| [FGAI4H-I-014-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-014-A02.docx) | | Att.2 – CfTGP (TG-Malaria) | |  |  |
| [FGAI4H-I-014-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-014-A03.pptx) | | Att.3 – Presentation (TG-Malaria) | |  |  |
| [FGAI4H-I-015](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-015.docx) | Updates for Maternal and child health (TG-MCH) | | | TG-MCH Topic Driver |  |
| [FGAI4H-I-015-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-015-A01.docx) | | Att.1 – TDD update (TG-MCH) | |  |  |
| [FGAI4H-I-015-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-015-A02.docx) | | Att.2 – CfTGP (TG-MCH) | |  |  |
| [FGAI4H-I-015-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-015-A03.pptx) | | Att.3 – Presentation (TG-MCH) | |  |  |
| [FGAI4H-I-016](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-016.docx) | Updates for Neurological disorders (TG-Neuro) | | | TG-Neuro Topic Driver |  |
| [FGAI4H-I-016-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-016-A01.docx) | | Att.1 – TDD update (TG-Neuro) | |  |  |
| [FGAI4H-I-016-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-016-A02.docx) | | Att.2 – CfTGP (TG-Neuro) | |  |  |
| [FGAI4H-I-016-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-016-A03.pptx) | | Att.3 – Presentation (TG-Neuro) | |  |  |
| [FGAI4H-I-017](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-017.docx) | Updates for Ophthalmology (TG-Ophthalmo) | | | TG-Ophthalmo Topic Driver |  |
| [FGAI4H-I-017-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-017-A01.docx) | | Att.1 – TDD update (TG-Ophthalmo) | |  |  |
| [FGAI4H-I-017-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-017-A02.docx) | | Att.2 – CfTGP (TG-Ophthalmo) | |  |  |
| [FGAI4H-I-017-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-017-A03.pptx) | | Att.3 – Presentation (TG-Ophthalmo) | |  |  |
| [FGAI4H-I-018](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-018.docx) | Updates for Outbreak detection (TG-Outbreaks) | | | TG-Outbreaks Topic Driver |  |
| [FGAI4H-I-018-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-018-A01.docx) | | Att.1 – TDD update (TG-Outbreaks) | |  |  |
| [FGAI4H-I-018-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-018-A02.docx) | | Att.2 – CfTGP (TG-Outbreaks) | |  |  |
| [FGAI4H-I-018-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-018-A03.pptx) | | Att.3 – Presentation (TG-Outbreaks) | |  |  |
| [FGAI4H-I-019](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-019.docx) | Updates for Psychiatry (TG-Psy) | | | TG-Psy Topic Driver |  |
| [FGAI4H-I-019-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-019-A01.docx) | | Att.1 – TDD update (TG-Psy) | |  |  |
| [FGAI4H-I-019-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-019-A02.docx) | | Att.2 – CfTGP (TG-Psy) | |  |  |
| [FGAI4H-I-019-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-019-A03.pptx) | | Att.3 – Presentation (TG-Psy) | |  |  |
| [FGAI4H-I-020](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-020.docx) | Updates for Snakebite and snake identification (TG-Snake) | | | TG-Snake Topic Driver |  |
| [FGAI4H-I-020-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-020-A01.docx) | | Att.1 – TDD update (TG-Snake) | |  |  |
| [FGAI4H-I-020-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-020-A02.docx) | | Att.2 – CfTGP (TG-Snake) | |  |  |
| [FGAI4H-I-020-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-020-A03.pptx) | | Att.3 – Presentation (TG-Snake) | |  |  |
| [FGAI4H-I-021](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-021.docx) | Updates for Symptom assessment (TG-Symptom) | | | TG-Symptom Topic Driver |  |
| [FGAI4H-I-021-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-021-A01.docx) | | Att.1 – TDD update (TG-Symptom) | |  |  |
| [FGAI4H-I-021-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-021-A02.docx) | | Att.2 – CfTGP (TG-Symptom) | |  |  |
| [FGAI4H-I-021-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-021-A03.pptx) | | Att.3 – Presentation (TG-Symptom) | |  |  |
| [FGAI4H-I-022](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-022.docx) | Updates for Tuberculosis (TG-TB) | | | TG-TB Topic Driver |  |
| [FGAI4H-I-022-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-022-A01.docx) | | Att.1 – TDD update (TG-TB) | |  |  |
| [FGAI4H-I-022-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-022-A02.docx) | | Att.2 – CfTGP (TG-TB) | |  |  |
| [FGAI4H-I-022-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-022-A03.pptx) | | Att.3 – Presentation (TG-TB) | |  |  |
| [FGAI4H-I-023](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-023.docx) | Updates for Radiology (TG-Radiology) | | | TG-Radiology Topic Driver |  |
| [FGAI4H-I-023-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-023-A01.docx) | | Att.1 – TDD update (TG-Radiotherapy) | |  |  |
| [FGAI4H-I-023-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-023-A02.docx) | | Att.2 – CfTGP (TG-Radiotherapy) | |  |  |
| [FGAI4H-I-023-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-023-A03.pptx) | | Att.3 – Presentation (TG-Radiotherapy) | |  |  |
| [FGAI4H-I-024](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-024.docx) | Initial documents for Primary and secondary diabetes prediction (TG-Diabetes) | | | TG-Diabetes Topic Driver |  |
| [FGAI4H-I-024-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-024-A01.docx) | | | Att.1 – TDD update (TG-Diabetes) |  |  |
| [FGAI4H-I-024-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-024-A02.docx) | | | Att.2 – CfTGP (TG-Diabetes) |  |  |
| [FGAI4H-I-024-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-024-A03.pptx) | | | Att.3 – Presentation (TG-Diabetes) |  |  |
| [FGAI4H-I-025](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-025.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-025-A01.docx) | LS on AI/ML and security [from ITU-T SG17] | | |  |  |
| [FGAI4H-I-026](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-026.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-026-A01.pptx) | Proposal to set up an ad-hoc working group on AI and other digital technologies for COVID-19 health emergency (WG-WE) | | | CAICT, PAHO |  |
| [FGAI4H-I-027](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-027.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-027-A01.pptx) | Updated DEL07.2: AI technical test specification | | | Editors |  |
| [FGAI4H-I-028](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-028.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-028-A01.pdf) | Updated DEL07: AI for health evaluation considerations | | | Editors |  |
| [FGAI4H-I-029-R02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-029-R02.docx) | Updated proposal to set up an updating document on deliverables structure and summary | | | CAICT (China) |  |
| [FGAI4H-I-030](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-030.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-030-A01.pptx) | Updated DEL10: Use cases of the ITU/WHO Focus Group on AI for Health: introduction to the topic description documents | | | Editor |  |
| [FGAI4H-I-031](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-031.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-030-A01.pptx) | Proposal for improving the onboarding process for new FG-AI4H members | | | Editors |  |
| [FGAI4H-I-032](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-032.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-032-A01.pptx) | DEL06: AI training best practices specification | | | Editors |  |
| [FGAI4H-I-033](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-033.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-033-A01.pptx) | Updated DEL03: AI4H requirements specifications | | | Editors |  |
| [FGAI4H-I-034](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-034.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-034-A01.pptx) | Updated DEL05.4: Training and test data specification | | | Editors |  |
| [FGAI4H-I-035](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-035.docx) | Updated DEL07.3: Data and artificial intelligence assessment methods (DAISAM) reference | | | Editors |  |
| [FGAI4H-I-036](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-036.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-036-A01.pptx) | Updated DEL02.2: Guidelines for AI based medical device: Regulatory requirements (Draft: April 2020) | | | Editors |  |
| [FGAI4H-I-037](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-037.docx) | FG-AI4H assessment platform | | | WG Chairs |  |
| [FGAI4H-I-038](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-038.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-038-A01.pptx) | DEL02: Outline describing suggested topics for the regulatory considerations on AI for Health Working Group (Draft: April 2020) | | | Editors |  |
| [FGAI4H-I-03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-039.docx)9 | Proposal for new topic group: Endoscopy | | | Tencent Healthcare (China) |  |
| [FGAI4H-I-040](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-040.docx) | TG-Ophthalmo: Data set construction and annotation of artificial intelligence assisted screening system based on fundus image | | | Tencent Healthcare (China) |  |
| [FGAI4H-I-041](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-041.docx) | TG-Ophthalmo: Evaluation method and index of artificial intelligence glaucoma assisted screening system based on fundus image | | | Tencent Healthcare (China) |  |
| [FGAI4H-I-042](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-042.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-041-A02.pptx) | TG-Dental: Artificial intelligence for dental image analysis: A Guide for Authors and Reviewers | | | TG-Dental Topic Driver |  |
| [FGAI4H-I-043-R01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-043-R01.docx) | Updated DEL05.3 data specification | | | Editor |  |
| [FGAI4H-I-044](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-044.docx) | Updated DEL05.1: Data requirements | | | Editor |  |
| [FGAI4H-I-045](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-045.docx) | Updated DEL05.5: Data handling | | | Editor |  |
| [FGAI4H-I-046](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-046.docx) | Updated DEL05.6: Data sharing practices | | | Editors |  |
| [FGAI4H-I-047](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-047.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-047-A01.pptx) | DEL05.x: Annotation tool - Draft requirements study for an annotation tool | | | Editors |  |
| [FGAI4H-I-048](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-048.docx) | Updated DEL09.1: Mobile Applications | | | Editors |  |
| [FGAI4H-I-049](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-049.docx) | Updated DEL09.2: Cloud-based AI applications | | | Editors |  |
| [FGAI4H-I-050](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-050.docx) | Updated DEL09: AI4H applications and platforms | | | Editors |  |
| [FGAI4H-I-051](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-051.docx) | Updates on the preparation of DEL07.4: Clinical Evaluation | | | Editors |  |
| [FGAI4H-I-101](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-101.docx) | Report of the 9th meeting (Meeting I) of the Focus Group on Artificial Intelligence for Health (FG-AI4H) | | | FG-AI4H |  |
| [FGAI4H-I-102](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-102.docx) | Updated call for proposals: Use cases, benchmarking, and data | | | FG-AI4H |  |
| [FGAI4H-I-105](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-105.docx) | Updated TDD Template | | | FG-AI4H |  |
| [FGAI4H-I-200](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-200.docx) | Updated list of FG-AI4H deliverables | | | FG-AI4H |  |
| [FGAI4H-I-211](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-211.docx) | DEL00 - Overview of deliverables | | | Editor |  |
| [FGAI4H-I-212](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-212.docx) | Updated white paper | | | Editor |  |

Annex C:  
List of participants

| First Name | Last Name | Entity | Country | 7 May | 8 May |
| --- | --- | --- | --- | --- | --- |
| Auss | Abbood | Robert Koch Institute | Germany | X | X |
| Sarah | Abo Alasrar | Medical graduate | Switzerland | X | X |
| Hassan | Abo Seida | National Authority for Remote Sensing and Space Sciences | Egypt | X |  |
| Osama | AbouElkhir | TachyHealth | UAE | X | X |
| Amr | Ahmed | TachyHealth | Egypt | X | X |
| Sangyoung | AHN | Kyung Hee University | Korea | X |  |
| Darlington | Akogo | minoHealth AI Labs | Ghana | X | X |
| Xiaomi | An | Expert | China | X | X |
| Opeoluwa | Ashimi | Promane and Promade Limited | Nigeria | X |  |
| Badar | Awladthani | Ministry of Health | OMA |  | X |
| Pat | Baird | Philips | USA | X | X |
| Pradeep | Balachandran | Expert | India | X | X |
| Covadonga | Bascaran | London School Hygiene Tropical Medicine | UK | X |  |
| Thomas | Basikolo | ITU | – | X |  |
| Patrick Newton | Bondo | Outreach Social Care Project | South Africa | X | X |
| Saul | Calderon Ramirez | Instituto Tecnológico de Costa Rica | Costa Rica | X | X |
| Thaddeus | Carvajal | Ehime University | Japan | X |  |
| Manjeet | Chalga | Indian council of medical research | India | X | X |
| Shih-Fang | Chang | ITRI International Inc. | USA | X |  |
| Prashant | Chugh | Centre for Development of Telematics | India | X | X |
| Koen | Cobbaert | Philips | Belgium | X |  |
| Nelson | Connio | Salud.uy | URG |  | X |
| Alexandre | Cuenat | Wellcome Trust | UK | X | X |
| Ayda | Dabiri | ITU | – | X | X |
| Simão Ferraz | de Campos Neto | ITU | – | X | X |
| Joao | Dias | GeekVision | Brazil | X |  |
| hui | duan | 7layers | China | X |  |
| Okechukwu | Effoduh | Praxis & Gnosis Law | Nigeria | X |  |
| M Khair | ElZarrad | U.S. Food and Drug Administration | USA | X | X |
| Jana | Fehr | Digital Health Center, Hasso Plattner In | Germany | X | X |
| Ananya | Gangavarapu | ethicallyai | USA | X | X |
| Stephane | Ghozzi | Robert Koch Institute | Germany | X |  |
| Nicolas | Goeldel | Hello Tomorrow | France | X | X |
| Maria Fernanda | Gonzalez Alvarez | 1DOC3 | Mexico | X | X |
| Jun | Gu | Infervision | China | X | X |
| Jiaying | Guo | CAICT | CHN |  | X |
| Zdenek | Gütter | Ministry of Industry and Trade | Czech Republic | X |  |
| Ilana | Harrus | AAAS | USA | X | X |
| Henry | Hoffmann | Ada Health GmbH | Germany | X | X |
| Mao | Huan | 7layers | China | X |  |
| Edson Mintsu | Hung | ANATEL | Brazil | X | X |
| Bilel | Jamoussi | ITU | – | X | X |
| Jonghong | Jeon | ETRI | Korea | X |  |
| Christian | Johner | Johner Institute | Germany |  | X |
| SAURABH | JOHRI | miss | UK | X |  |
| Rigveda | Kadam | Foundation for Innovative New Diagnostic | Switzerland | X | X |
| Ferath | Kherif | CHUV | Switzerland | X | X |
| Frederick | Klauschen | TU Berlin | Germany | X |  |
| Joachim | Krois | Charité - Universitätsmedizin Berlin | Germany | X |  |
| Monique | Kuglitsch | Fraunhofer HHI & IIS | Germany | X | X |
| Marcos | Lacayo Bosche | Estacion Vital | Nicaragua | X |  |
| Nicolas | Langer | University of Zurich | Switzerland | X |  |
| Marc | Lecoultre | MLLab.ai | Switzerland | X | X |
| Naomi | Lee | The Lancet | UK |  | X |
| Alixandro | Leite | LAMFO | Brazil | X | X |
| Yun | LI | Tencent Technology (Shenzhen) Company Limited | China | X | X |
| Yue | Lin | Ora | New Zealand | X | X |
| Dash | Liu | Huawei Technologies Co., Ltd. | China | X |  |
| LIMING | LIU | Ministry of Industry and Information Technology (MIIT) | China | X | X |
| Xiaoxuan | Liu | University of Birmingham, UK | UK | X |  |
| Xiaoyin | Liu | National Medical Products Administration | China | X | X |
| Li | Lu | VoxelCloud | China | X | X |
| Zhong (Noah) | Luo | Huawei Technologies Co., Ltd. | China | X |  |
| Jackie | Ma | Fraunhofer HHI & IIS | Germany | X | X |
| Khondaker Abdhullah Al | Mamun | Ministry of Posts, Telecoms and Information Technology | Bangladesh | X | X |
| Kirmene | Marzouki | SPIKE-X | Tunisia | X |  |
| Christian | Matek | TU Berlin | Germany | X | X |
| Viktor | Matyas | TU Berlin | Germany | X |  |
| Johannes | Mehrer | Johannes Mehrer | Germany | X |  |
| Audrey | Menezes | Department for Digital, Culture, Media and Sport (DCMS) | UK | X |  |
| Kaoru | Mizuno | ITU | – | X | X |
| Andrew | Murchison | John Radcliffe Hospital | UK | X | X |
| Joel | Myhre | Oslo Metropolitan University | Norway | X |  |
| Rose | Nakasi | Makerere University | Uganda | X | X |
| Tom | Neumark | University of Oslo | Norway | X | X |
| Weiqing | NIE | Tencent Technology (Shenzhen) Company Limited | China | X |  |
| Luis | Oala | Fraunhofer HHI & IIS | Germany | X | X |
| Pablo | Orefice | Salud.uy | URG |  | X |
| Maimouna Lydia | Ouedraogo | Ministère du Développement de l'Economie numérique et des Postes | Burkina Faso | X |  |
| Vishnu Ram | Ov | Expert | India | X |  |
| Pierpaolo | Palumbo | University of Bologna | Italy | X |  |
| Natalie | Pankova | Metadvice | Germany |  | X |
| Lukas | Picek | Université de Genève | Switzerland | X |  |
| Lina Elizabeth | Porras Santana | 1DOC3 SAS | Colombia | X | X |
| Jiangbo | Pu | IBME, Chinese Academy of Medical Sciences | China | X | X |
| Sameer | Pujari | WHO | ­ | X | X |
| Rose | Purcell | Food and Drug Administration | USA | X | X |
| Bastiaan | QUAST | ITU | – | X | X |
| Kester | Quist-Aphetsi | CRITAC | Ghana | X | X |
| Herilalaina | Rakotoarison | INRIA | France | X |  |
| Parvathi | Ram | St John's Medical College | India | X |  |
| Anne | Reijns | Avegen Pvt Ltd | UK | X |  |
| Andreas | Reis | WHO | ­ |  | X |
| Ana | Riviere Cinnamond | Pan-American Health Organization | ­ | X | X |
| Bill | Roger | Stanford University | USA | X | X |
| Rafael | Ruiz de Castaneda | Université de Genève | Switzerland | X |  |
| Dominik | Schneider | Merck KGaA | Germany | X |  |
| Reinhard | Scholl | ITU | – | X | X |
| Falk | Schwendicke | Charité Dental/Craniofacial Sciences | Germany | X |  |
| Sheikh Mohammed | Shariful Islam | RMIT University | Australia | X | X |
| Yu | Shi | 7layers | China | X |  |
| Arun | Shroff | Xtend.AI | USA | X |  |
| Xinming | Sim | AI Singapore | Singapore | X | X |
| Manjula | Singh | Ministry of Communications | India | X | X |
| Tarry | Singh | deepkapha.ai | Netherlands | X |  |
| Margarita | Sordo | Brigham & Women's Hospital, Harvard Medi | USA | X | X |
| Karthik | Srinivasan | Aravind Eye Hospital | India | X |  |
| Rajaraman | Subramanian | Calligo Technologies Private Limited | India | X | X |
| yishan | teng | China Information and Communication Research Institute | China | X |  |
| Shubhanan | Upadhyay | Ada Health GmbH | Germany | X | X |
| Andrés | Valdivieso | Anastasia | Chile | X |  |
| Judith | van Andel | WHO | ­ | X | X |
| Huogen | Wang | Hithink RoyalFlush Information Network | China | X | X |
| Victoria | Wang | IEEE | USA | X | X |
| Eva | Weicken | Fraunhofer HHI | Germany | X | X |
| Markus | Wenzel | Fraunhofer HHI & IIS | Germany | X | X |
| Thomas | Wiegand | Fraunhofer HHI & IIS | Germany | X | X |
| Stefan | Winkler | AI Singapore | Singapore | X | X |
| Jianrong | Wu | Tencent Technology (Shenzhen) Company Limited | China | X |  |
| Sheng | Wu | WHO | ­ | X | X |
| Chengjie | Xie | Huawei Technologies Co., Ltd. | China | X |  |
| Hui | Xing | CuraCloud | China | X |  |
| Xiaoyan | Xing | Tsinghua University | China | X | X |
| Shan | Xu | Ministry of Industry and Information Technology (MIIT) | China | X | X |
| Yue | Xu | Zhejiang University | China | X | X |
| Xin-Xin | Yan | Fu Wai Hospital | China | X | X |
| Ruijie | Yang | Ministry of Industry and Information Technology (MIIT) | China | X | X |
| Mohd Helmi bin | Zakariah | AIME HEALTHCARE SDN BHD | Malaysia | X | X |
| Jing | Zhang | ritt7layers | China | X |  |
| Siyao | Zhang | Haohan Data | China | X |  |
| Yajun | Zhang | Tencent Technology (Shenzhen) Company Limited | China | X | X |
| Yanchun | Zhu | Tencent Technology (Shenzhen) Company Limited | China | X |  |

Annex D  
Summary of FG-AI4H resources and electronic working methods

Working groups

| Working Group | Leadership |
| --- | --- |
| Data and AI solution assessment methods (WG-DAISAM) | Chair: Pat Baird (Philips) Vice-chair: Luis Oala (Fraunhofer HHI, DE) |
| Data and AI solution handling (WG-DASH) | Chair: Marc Lecoultre (MLlab.AI, CH) Vice chair: Ferhat Kerif (CHUV, CH) |
| Operations (WG-O) | Co-chairs: Markus Wenzel and Monique Kuglitsch (Fraunhofer HHI, Germany) |
| Regulatory considerations on AI for health (WG-RC) | Chair: Naomi Lee (The Lancet, UK)  Vice-chairs:   * Paolo Alcini (European Medicines Agency, EU) * Chandrashekar Ranga (CDSCO, India) * Khair ElZarrad (FDA, USA) * Wolfgang Lauer (Federal Institute for Drugs and Medical Devices, Germany) * Peng Liang (National Medical Products Administration, China) |
| Ethical considerations on AI for health (WG-RC) | Chair: Andreas Reis (WHO) |
| Clinical Evaluation (WG-E) | Chair: Naomi Lee (The Lancet, UK) |

Topic Groups

| Topic group | Acronym | Leader | References | Created |
| --- | --- | --- | --- | --- |
| 1. Cardiovascular disease risk prediction | TG-Cardio | [Benjamin Muthambi](mailto:brm5@caa.columbia.edu) (Watif Health, South Africa) | [I-006-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-006-A01.docx) | C |
| 1. Dermatology | TG-Derma | [Maria Vasconcelos](mailto:maria.vasconcelos@fraunhofer.pt) (Fraunhofer Portugal) | [I-007-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-007-A01.docx) | B |
| 1. Diagnosis of bacterial infection and anti-microbial resistance | TG-Bacteria | [Nada Malou](mailto:nada.malou@paris.msf.org) (MSF, France) | Proposal: [F-033](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-F-033.docx) (MSF, France) | F |
| 1. Volumetric chest CT | TG-DiagnosticCT | [Kuan Chen](mailto:ckuan@infervision.com) (Infervision, China) | [I-009-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-009-A01.docx) | D |
| 1. Dental diagnostics and digital dentistry | TG-Dental | [Falk Schwendicke](mailto:falk.schwendicke@charite.de) and [Joachim Krois](mailto:Joachim.krois@charite.de) (Charité Berlin, Germany) | [I-010-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-010-A01.docx) | G |
| 1. Falsified Medicine | TG-FakeMed | [Franck Verzefé](mailto:fverzefe@gmail.com) (TrueSpec-Africa, DRC) | Proposal: [G-022](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-G-022.docx) (TrueSpec-Africa, DRC) | G |
| 1. Falls among the elderly | TG-Falls | [Inês Sousa](mailto:ines.sousa@fraunhofer.pt) (Fraunhofer Portugal) | [I-012-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-012-A01.docx) | B |
| 1. Histopathology | TG-Histo | [Frederick Klauschen](mailto:frederick.klauschen@charite.de) (Charité Berlin, Germany) | [I-013-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-013-A01.docx) | B |
| 1. Malaria detection | TG-Malaria | [Rose Nakasi](mailto:g.nakasi.rose@gmail.com) (Makerere University, Uganda) | [I-014-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-014-A01.docx) | F |
| 1. Maternal and child health | TG-MCH | [Raghu Dharmaraju](mailto:rdharmaraju@gmail.com) (Wadhwani AI, India) and [Alexandre Chiavegatto Filho](mailto:alexdiasporto@usp.br) (University of São Paulo, Brazil) | [I-015-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-015-A01.docx) | D; G |
| 1. Neurological disorders | TG-Neuro | [Marc Lecoultre](mailto:ml@mllab.ai) (ML Labs, Switzerland) | [I-016-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-016-A01.docx) | B |
| 1. Ophthalmology | TG-Ophthalmo | [Arun Shroff](mailto:arunshroff@gmail.com) (MedIndia) | [I-017-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-017-A01.docx) | B |
| 1. Outbreak detection | TG-Outbreaks | [Stéphane Ghozzi](mailto:ghozzis@rki.de) (Robert Koch Institute, Germany) | [I-018-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-018-A01.docx) | E |
| 1. Psychiatry | TG-Psy | [Nicolas Langer](mailto:n.langer@psychologie.uzh.ch) (ETH Zurich, Switzerland) | [I-019-A01-R01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-019-A01-R01.docx) | C |
| 1. Snakebite and snake identification | TG-Snake | [Rafael Ruiz de Castaneda](mailto:Rafael.RuizDeCastaneda@unige.ch) (UniGE, Switzerland) | [I-020-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-020-A01.docx) | B |
| 1. Symptom assessment | TG-Symptom | [Henry Hoffmann](mailto:henry.hoffmann@ada.com) (Ada Health, Germany) | [I-021-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-021-A01.docx) | B |
| 1. Tuberculosis | TG-TB | [Manjula Singh](mailto:singhmanjula.hq@icmr.gov.in) (ICMR, India) | [I-022-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-022-A01.docx) | C |
| 1. Radiology | TG-Radiology | [Darlington Ahiale Akogo](mailto:darlington@gudra-studio.com) (minoHealth AI Labs, Ghana) | [I-023-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-023-A01.docx) | D; H |
| 1. Primary and secondary diabetes prediction | TG-Diabetes | [Andrés Valdivieso](mailto:avaldivieso@anastasia.ai) (Anastasia.ai & Tecnigen, Chile) | [I-024-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-024-A01.docx) | H |
| 1. Endoscopy | TG-Endoscopy | [Jianrong Wu](mailto:edwinjrwu@tencent.com) (Tencent Healthcare, China) | Proposal: [I-039](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-039.pptx) (Tencent Healthcare, China) | I |

Mailing lists

| Description | Mailing list | Archive |
| --- | --- | --- |
| General mailing list | [fgai4h@lists.itu.int](mailto:fgai4h@lists.itu.int) | <https://itu.int/ml/lists/arc/fgai4h> |
| TG-Cardio), specific discussions for sub-topic on clinical predictions | [fgai4htgcardiocp@lists.itu.int](mailto:fgai4htgcardiocp@lists.itu.int) | <https://itu.int/ml/lists/arc/fgai4htgcardiocp> |
| TG-Cardio), specific discussions for sub-topic on cardiac image analyses | [fgai4htgcardiocia@lists.itu.int](mailto:fgai4htgcardiocia@lists.itu.int) | <https://itu.int/ml/lists/arc/fgai4htgcardiocia> |
| TG-Diabetes | [fgai4htgdiabetes@lists.itu.int](mailto:fgai4htgdiabetes@lists.itu.int) | <https://itu.int/ml/lists/arc/fgai4htgdiabetes> |
| TG-Falls | [fgai4htgfalls@lists.itu.int](mailto:fgai4htgfalls@lists.itu.int) | <https://itu.int/ml/lists/arc/fgai4htgfalls> |
| TG-Malaria | [fgai4htgmalaria@lists.itu.int](mailto:fgai4htgmalaria@lists.itu.int) | <https://itu.int/ml/lists/arc/fgai4htgmalaria> |
| TG-Ophthalmo | [fgai4htgophthalmo@lists.itu.int](mailto:fgai4htgophthalmo@lists.itu.int) | <https://itu.int/ml/lists/arc/fgai4htgophthalmo> |
| TG-Outbreaks | [fgai4htgoutbreaks@lists.itu.int](mailto:fgai4htgoutbreaks@lists.itu.int) | <https://itu.int/ml/lists/arc/fgai4htgoutbreaks> |
| TG-Symptoms | [fgai4htgsymptom@lists.itu.int](mailto:fgai4htgsymptom@lists.itu.int) | <https://itu.int/ml/lists/arc/fgai4htgsymptom> |

Working methods (Ref: [E-101](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-E-101.docx), report of Meeting E)

Decision making by correspondence

Decisions should preferably be taken in physical meetings of the FG. However, in order to allow the FG to work more efficiently, an online decision-making process would be useful.

The FG agreed to an online approval process for taking decisions (e.g. appointments and documentation). The initial procedure is as follows:

* Decisions are taken by consensus. (Note: consensus is declared by the chairman and it does *not* imply unanimity.)
* The general FG mailing list ([fgai4h@lists.itu.int](mailto:fgai4h@lists.itu.int)) is used to announce the decision being taken, provide links to relevant documents.
* Specify a commenting period, typically two weeks, for receiving comments with concerns. These comments should be addressed by email to the secretariat, [tsbfgai4h@itu.int](mailto:tsbfgai4h@itu.int). Absence of comments imply agreement to the proposed decision.
* If comments are received, they are discussed and resolved by the FG management in coordination with the commenters.
* If the amendment is minor, the chairman declares approval
* If the amendment is substantive, another consultation is started, or decision is postponed till the next meeting of the FG

Organizing interim electronic meetings

The following procedure is to be applied for organizing interim meetings of the FG and its WGs:

* **Announcement** in the general FG email reflector ([fgai4h@lists.itu.int](mailto:fgai4h@lists.itu.int)) for date/time and objectives **two weeks prior**
* **Documents** uploaded to the appropriate repository

Annex E  
Summary of decisions

This is a summary of the decisions taken at Meeting I (E-meeting, 7-8 May 2020):

[Dec-I-1. TG Drivers are asked to read the IPR call as found in I-001-R2 Annex A and collect any declarations of made in return to the IPR question in their meeting minutes.](#_Toc43645228)

[Dec-I-2. The report of the Brasilia meeting in H-101-R01 was approved without comments and its two output documents were noted (H-102-R01 and H-200-R01).](#_Toc43645229)

[Dec-I-3. Agreed to provide to ITU-T SG16, the FG-AI4H parent group, a snapshot of the FG-AI4H deliverables and to request ITU-T SG16 to extend the term of the FG-AI4H by an additional two years (i.e. till September 2022).](#_Toc43645230)

[Dec-I-4. Agreed to create a DEL00 document "Overview of the FG-AI4H deliverables" with Shan Xu (CAICT, China) as editor. The initial draft is found in I-211.](#_Toc43645231)

[Dec-I-5. Agreed to take into account the content of DEL00 to review the TDD template, to ensure that all horizontal deliverable elements are taken into account for the description of each of the topic areas.](#_Toc43645232)

[Dec-I-6. Agreed to pursue the specification of requirements for an annotation tool, provisionally denoted as DEL5.7. Marc Lecoultre and Luis Oala will drive this process. The TG Drivers are kindly requested to support Marc and Luis in this initiative, initially by reviewing I-047 and providing feedback to them.](#_Toc43645233)

[Dec-I-7. TG Drivers to review the broad structure of DEL 3 as found in in the deliverables page and provide feedback to Pradeep Balachandran.](#_Toc43645234)

[Dec-I-8. Agreed to further improve the onboarding process by 1) improving the website as central information source (H-031); 2) Updating the onboarding document concerning a) Information: visualization, less text form, for example flow-charts & illustrations; b) develop a history of document structure within the FGAI4H; and c) add an outline for new topic group drivers using attachment in I-031.](#_Toc43645235)

[Dec-I-9. It was agreed to create the new WG on Clinical Evaluation (WG-CE), with terms of reference to be developed under the coordination of Naomi Lee (The Lancet, UK) shortly after Meeting I and submitted for comments and approval through the FG-AI4H mailing list.](#_Toc43645236)

[Dec-I-10. Agreed to create an ad-hoc group co-led by Shan Xu (CAICT, China) and Ana Rivière Cinnamond (PAHO) to collect effective experiences on the use of AI and other digital technologies to combat COVID-19 at the various stages of the emergency, contingent to confirmation of name and ToR by two-week consultation in the FG-AI4H mailing list.](#_Toc43645237)

[Dec-I-11. It was agreed to remind TG Drivers that an update of their activities is expected at each FG meeting.](#_Toc43645238)

[Dec-I-12. It was agreed to issue the updated TDD template as FGAI4H-I-105, subject to further editing after comparison for coverage of the theme of the horizontal FG-AI4H deliverable (DEL1 to DEL9).](#_Toc43645239)

[Dec-I-13. Agreed to create a new Topic Group on endoscopy (TG-Endoscopy), with Jianrong Wu (Tencent Healthcare, China) as Topic Driver.](#_Toc43645240)

[Dec-I-14. It was agreed to develop a compile a collection of open source tools. Suggestions should be e-mailed to the secretariat, who will curate a list.](#_Toc43645241)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_