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| ITU Logo | INTERNATIONAL TELECOMMUNICATION UNION  **TELECOMMUNICATION STANDARDIZATION SECTOR**  STUDY PERIOD 2017‑2020 | | FG‑AI4H‑A‑101-R01 | |
| **ITU‑T Focus Group on AI for Health** | |
| **Original: English** | |
| **WG(s):** | | Plenary | Geneva, 26‑27 September 2018 | |
| **DOCUMENT** | | | | |
| **Source:** | | Focus Group on Artificial Intelligence for Health (FG‑AI4H) | | |
| **Title:** | | Report of FG‑AI4H Meeting A (Geneva, 26‑27 September 2018) | | |
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| **Abstract:** | This document contains the report of the first meeting of the Focus Group on Artificial Intelligence for Health (FG‑AI4H). Two new vice chairmen were elected, and two Working Groups created (Operations and Health Requirements). Three output documents were produced and one whitepaper was updated. One outgoing liaison statement (LS) was prepared. The next meeting will be held at Columbia University in New York City, NY, USA, 15-16 November 2018, preceded by a workshop on 14 November 2018. Revision 1 corrects registration mistakes by the secretariat. |

Executive Summary

The first meeting of the FG‑AI4H was held in Geneva at WHO headquarters, 26-27 September 2018, preceded on 25 September 2018by the first ITU/WHO Workshop on Artificial Intelligence for Health. About 106 participants attended the workshop and meeting.

The following were the main results from the first meeting.

The FG‑AI4H added two vice‑chairmen: Stephen Ibaraki (ACM and REDDS Capital, USA) and Sameer Pujari (WHO).

FG‑AI4H established initially two Working Groups (WGs):

* WG‑O: Operations, chairman: Markus Wenzel (Fraunhofer HHI, Germany).
* WG‑HR: Health Requirements, co‑chairmen: Laragh Gollogly (WHO) and Ramesh Krishnamurthy (WHO).

More WGs will be established, as need is identified.

The FG reviewed 32 input documents and created three output documents:

* [FGAI4H‑A‑102](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-102.docx): Draft Call for Proposals: use cases, benchmarking, and data
* [FGAI4H‑A‑103](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-103.docx): Draft criteria for data to be accepted by the Focus Group
* [FGAI4H‑A‑104](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-104.docx): Draft thematic classification scheme

It also updated a whitepaper ([FGAI4H‑A‑006](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-006.docx)) which provides background information on the work planned for the FG.

The next meeting of FG‑AI4H will take place at Columbia University in New York City, NY, USA, 15-16 November 2018, preceded by a workshop on 14 November 2018. Updated information will be made available on the FG webpage.

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# General

Under the kind invitation of WHO, the first meeting of the FG‑AI4H was held at WHO headquarters in Geneva, 26-27 September 2018, preceded by a workshop on 25 September 2018. The first day was dedicated to the first ITU/WHO Workshop on Artificial Intelligence for Health. The meeting was chaired by Thomas Wiegand (Fraunhofer HHI/TU Berlin, Germany) with the assistance of vice‑chairmen Ramesh Krishnamurthy (WHO/Health Metrics and Measurement Cluster), Sameer Pujari (Be Healthy Be Mobile Initiative and WHO/Non‑communicable Diseases Cluster) and Marcel Salathé (EPFL, Switzerland), with the assistance of the secretariat led by Simão Campos (ITU TSB) assisted by Ayda Dabiri (ITU) and Bastiaan Quast (ITU). Vice‑chairmen Min Dong (CAICT, China) and Stephen Ibaraki (ACM and REDDS Capital, USA) were not able to attend the meeting.

At the opening, the logistics of the FG were explained.

Lubna Al‑Ansary, Assistant Director‑General (WHO), gave an opening speech.

Chaesub Lee, Director of ITU Telecommunication Standardization Bureau (TSB), gave a speech highlighting the path to the creation of the FG and the high expectations for its outcomes.

Ramesh Krishnamurthy (FG‑AI4H vice‑chairman, WHO) provided the standardization perspective of WHO in the context of FG‑AI4H.

The participants introduced themselves and stated how they are interested in the work of the FG. See the list of participants in Annex D.

# Approval of agenda

The agenda ([A‑001‑R1](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-001-R1.docx)) was reviewed. [A‑001‑R2](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-001-R2.docx) provides the final agenda.

# ITU IPR policy

The group was made aware of the IPR patent policy to be followed by the FG. No declarations were made.

# Documentation

Documents for the meeting were found on the collaboration site for the FG‑AI4H, [https://itu.int/go/‌fgai4h/collab](https://itu.int/go/fgai4h/collab), at [https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/Forms/‌180925.aspx](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/Forms/180925.aspx).

A total of 32 input documents were considered.

The initial document list was found in [A‑010](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-010.docx). The meeting agreed with their allocation as found in [A‑001‑R1](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-001-R1.docx). Additional documents were produced during the meeting, as result of discussions. [A‑010‑R1](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-010-R1.docx) contains the final list of documents for the first meeting.

Concerning numbering of documents for the FG, it was agreed as follows:

* Each meeting will be designated by a letter, A being the first meeting, B the second, etc. and document numbers are reset to 1 at each meeting;
* Documents 1 to 10 are reserved for initial document from the management (agenda, etc.);
* Documents 1 to 100 are reserved for input contributions or intermediate documents developed at the meeting;
* Documents 101 and above are output documents for the meeting (including report, outgoing liaison statements and other agreed materials).

NOTE – For future meetings, the FG chairman suggested after the meeting the following:

* Each meeting will be designated by a letter, A being the first meeting, B the second, etc. and document numbers are reset to 1 at each meeting;
* Documents 1 to 100 are reserved for initial document from the management (agenda, etc.);
* Documents 101 to 900 are reserved for input contributions or intermediate documents developed at the meeting;
* Documents 901 and above are output documents for the meeting (including report, outgoing liaison statements and other agreed materials).

Deadline for submission at a meeting is normally set at seven days before the start of the meeting. Late contributions may be accepted depending on the workload and subject to the acceptance of the meeting.

# Communications from FG management

The white paper ([A‑006](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-006.docx)) was presented, with the understanding that it is an evolving document to be updated as the FG work progresses. A publicly available version is found on the FG‑AI4H home page,

[https://itu.int/en/ITU‑T/focusgroups/ai4h/Documents/FG‑AI4H\_Whitepaper.pdf](https://itu.int/en/ITUT/focusgroups/ai4h/Documents/FGAI4H_Whitepaper.pdf).

# Report on foundation of FG, July 2018

The chairman provided an oral report on the creation of the FG‑AI4H at the ITU‑T SG16 meeting in Ljubljana, Slovenia, 9-20 July 2018.

# Outcome of the workshop

The slides summarizing the outcomes of the workshop on 25 September 2018 were noted.

# FG Management

## Terms of Reference (ToR)

The ToR document ([A‑002](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-002.docx)) was noted.

An ambiguity was observed (see §10.2) for goals and objectives no.2:

*2. To collaborate with WHO in developing appropriate national guidance documents for establishing policy‑enabled environment to ensure the safe and appropriate use of AI in health.*

It was clarified that the objective is not for the FG to develop such national documents, but rather that the FG helps WHO to create national guidance documents, beyond the FG expertise; the FG can provide the supporting data for such documents.

## FG Vice Chairmen

The FG management nominated by SG16 in July 2018 was presented, and two additional vice‑chairmen were proposed and accepted by the meeting. The complete management team is as follows:

Chairman

* Thomas Wiegand (Fraunhofer HHI / TU Berlin, Germany)

Vice‑chairmen

* Min Dong (Chinese Academy of Information and Communication Technologies (CAICT), China)
* Stephen Ibaraki (Association for Computing Machinery (ACM) and REDDS Capital, USA)
* Ramesh Krishnamurthy (WHO/Health Metrics and Measurement Cluster)
* Sameer Pujari (Be Healthy Be Mobile Initiative and WHO/Non‑communicable Diseases Cluster)
* Marcel Salathé (EPFL, Switzerland)

## Conflict of interest declarations

The group noted that a WHO policy document found in document [A‑021](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-021.zip) provides text for disclosing interests of experts participating in WHO work. The participants were invited to examine the document aiming at the development of an FG specific document for disclosure of possible conflicts of interest. This is necessary to facilitate the adoption of the relevant outcomes of the FG by WHO.

## Structure of the FG

Document [A‑005‑R1](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-005-R1.docx) contained an initial structure proposal, where five working groups (WG) were suggested (A to E).

There was a suggestion to create an additional WG on "Scenarios and use cases". As only a single use case had been discussed so far, it was agreed to not pursue this idea at this time. It was noted that internal definitions ‑ including "use cases" need to be formalised in writing.

During discussions, the following were identified as potential WGs:

1. Use cases and applications
2. Technical requirements
3. Evaluation
4. Liaison
5. Ethics
6. Policy, and governance, and regulation

Document [A‑005‑R2](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-005-R2.docx) was produced after discussions and presented to the group, proposing the ToR for two groups. It is noted that Topic Areas would not be created at this meeting, despite being mentioned in [A‑005‑R2](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-005-R2.docx).

The ToRs of WG on Operations were agreed by the group. The ToRs of WG on Health Requirements were amended with the phrase "from a health perspective" and subsequently accepted by the group.

The chairman noted that WGs are structures that enable to FG to parallelise its work, when the volume of inputs cannot be handled efficiently.

In summary, it was decided to create the two WGs for which actual work could already start, WG "Operations" (WG‑O) and the WG "Health Requirements" (WG‑HR). Their ToRs are found in Annex A and Annex B, respectively. The creation of additional WGs will be considered at the next meeting, as need arises.

The FG agreed to nominate Markus Wenzel as the chairman of WG‑O "Operations", and to nominate Laragh Gollogly (Coordinator, WHO Press) and Ramesh Krishnamurthy (WHO) as co‑chairmen of WG‑HR "Health requirements".

# Tutorial on FG working methods

Document [A‑022](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-022.pptx) with a tutorial on FG working methods was presented by TSB (ITU).

The chairman requested that authors, when preparing abstracts for their contributions, should use neutral language to describe the proposals and avoid promotional or marketing statements. The aim is to use the abstract text in the meeting report to summarize each proposal. For this purpose, some guidance material will be provided.

Delegates were invited to sign up to the FG mailing list: [fgai4h@lists.itu.int](mailto:fgai4h@lists.itu.int). A free ITU user account is needed to subscribe. Instructions on creating such an account and subscribing to the mailing list are found at the Focus Group home page (direct links: [https://itu.int/en/ties-services/‌SiteAssets/Create%20and%20Activate%20User%20Account.pdf](https://itu.int/en/ties-services/SiteAssets/Create%20and%20Activate%20User%20Account.pdf) and <https://itu.int/en/ITU-T/focusgroups/ai4h/Pages/quicksteps.aspx>, respectively).

# Contributions and Liaison statements

## Liaison statement

The group reviewed the Liaison Statement (LS) from ITU‑T SG17 (Security) in [A‑017](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-017.zip) on AI /ML and security. Experts were invited to collaborate with SG17 on AI/ML‑related security matters as well as to contribute to the SG17 workshop on AI, ML and security being organized in Geneva, Switzerland, 21 January 2019. The LS was noted and no reply was felt to be necessary.

## AI4H use cases

The following documents were presented and noted:

* [A‑011](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-011.docx) China’s practice on precision medicine based on genome bioinformatics, health data and clinical data fusion‑The First Affiliated Hospital of Zhengzhou University
* [A‑012](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-012.docx) China's smart medical practice in skin diseases‑Xiangya Hospital Central South University
* [A‑018](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-018.docx) Predict of diabetes with the help of a deep neural network made from Auto‑encoder‑Modirian Research (Authors not present)
* [A‑019](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-019.docx) Appropriate uses of AI in the surgical patient‑Fotios Sofiadellis

During discussions, it was suggested to create a group separate from FG‑AI4H, on "Artificial Intelligence for Health: ethics, policy governance framework", which would collocate with FG‑AI4H at certain meetings.

It was clarified that ToR 2.2 on collaborating with WHO, is intended to say that: "the goal is that the Focus Group helps WHO create national guidance documents, beyond the Focus Group expertise. The Focus Group can provide the supporting data for such documents." (see note in §8.1)

Document [A‑020](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-020.docx) (Towards a potential AI4H use case "diagnostic self‑assessment apps" - Ada Health) was presented to the group.

* It was proposed to have a use case for a self‑diagnosis app, where symptoms are stated by the patient via text and a diagnosis is provided.
* It was noted that only medical doctors can legally make diagnosis, another term is needed, "diagnostic tool" may be used, alternatives: "Health advice", "triage", "next steps".
* It is observed that there is a variety of terms which are used loosely.
* It was proposed to have a "Glossary of terms" document, which can published.
* It was noted that ITU has experience with bringing two communities together in the FG on Digital Financial Services (financial and technical), which used a similar approach.
* It was noted that existing glossaries can serve as a basis.
* It was noted that FG management has reached out to medical regulators (e.g. FDA, EMA, Swissmedic), but the meeting was on too short notice.

## Data Sharing

Document [A‑013](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-013.docx) on effectiveness and experience sharing in the use of multi‑source heterogeneous clinical data (The First Affiliated Hospital of Zhengzhou University) was presented briefly and it was noted.

Document [A‑014](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-014.docx) on effectiveness and experience sharing of AI study on retinal diseases (Peking Union Medical College Hospital) was presented to the group. The proposal to create a training dataset on diabetic retinopathy was noted.

Document [A‑016](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-016.docx) with a proposal to work on data availability and benchmarking for AI based Depressive Disorder Assistance Service (AI‑DDAS) for teenagers (Hankuk University of Foreign Studies) was presented and noted. A participant observed that there is a strong case for applying this use case to refugees.

## Data quality evaluation

Document [A‑015](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-015.docx) with suggestions on data quality evaluation of AI for health (National Institute of Metrology, China) was presented to the group.

It was noted that the term standardization is used differently in different communities, be it a technical standard, or as is common in health, as a minimum accuracy level. This should be added to the terminology document to be maintained by the FG.

## Brainstorming

After presentation of all documents, the chairman called for a brainstorming session on future directions and to create a "parking lot" for questions that were not answered definitively. After the various exchanges, the following participants agreed to consolidate the ideas exchanged, in three areas:

* Data requirements: Markus Wenzel (markus.wenzel@hhi.fraunhofer.de)
* Data handling policy: Marc Lecoultre (ml@bigps.ch)
* Health classification: Shabbir Syed Abdul (drshabbir786@gmail.com)

These were reviewed on the 2nd day of the meeting, as noted in documents [A‑031](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-031.docx), [A‑029](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-029.docx)/ [A‑029](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-029.docx)‑[R1](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-029-R1.docx) and [A‑026](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-026.docx), respectively.

Document [A‑026](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-026.docx) was presented to the group with a summary of the brainstorming exercise, focusing on classification of the healthcare services. Participants were invited to further discuss the topic with the author and develop the ideas for a future meeting, within the context of WG‑HR.

Document [A‑031](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-031.docx) was presented to the group.

* It was noted there are several dilemmas around the issue of excluding *undisclosed* data contributors from the evaluation.
* It was noted that the requirements for government data contributors may not necessarily be the same as those for private sector contributors. A section should be inserted to address this.
* The document is adopted as an **output document**, [A‑103](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-103.docx), with Markus Wenzel as editor.

Document [A‑029](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-029.docx) was presented to the group.

* It was noted that an addition to the document could be to keep data until the creation of a new benchmark, in order to ensure models can be retested.
* It was noted that refusing identifiable data could make it impossible to collect data.
* It was noted that the document requires further improvements, group members are invited to improve the document by addressing the concerns raised, using [A‑029](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-029.docx) as a basis for the next meeting.

## Discussion of a use case and the associated data handling

It was noted that there was confusion in the group on the FG work methods, it was suggested to examine an example topic. In order to facilitate the discussions with a practical use case, document [A‑023](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-023.pdf) (University of Geneva) on the problem of identifying snakebites was presented to the group, accompanied by document [A‑027](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-027.pdf) (EPFL), explaining a process for running application challenges in the AI area.

* There is a question from the group on the utility of having multiple test sets.
* It was noted that the utility of this is very high, but the ultimate solution to cheating is taking submissions in the form of models that can be evaluated.

It was noted that "Model distilling" is a method to imitate models contained in binary files.

* It was noted that this group, being an ITU‑WHO initiative, can help ensure that submitters are confident that such things would not happen.

## Health requirements

Document [A‑030](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-030.docx) was presented to the group, as developed by FG vice-chairman Ramesh Krishnamurthy. It was suggested to have the use case of snakes and snake bites as a starting point in the discussion of [A‑030](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-030.docx).

It was noted that the FG's work depends on volunteers, and the selection of use cases cannot be "mandated" but needs the continued support and commitment of FG members to progress.

It was clarified that WGs are umbrella groups and its number is not related to the number of Topics / Use Cases.

It is noted that the AI‑benchmarking class type need to be revised.

Document [A‑025](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-025.docx) on defining the medical data space ‑ an approach driven by data type was presented to the group. The authors were invited to further develop the ideas for future discussion.

It was proposed to create a breakout group to merge documents [A‑030](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-030.docx), [A‑026](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-026.docx), [A‑025](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-025.docx), involving the various authors. The resulting document is found in A‑028. An alternative proposal was to take document [A‑030](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-030.docx) (coming from WHO) as a basis and refine this by the next meeting.

With this, it was agreed to adopt [A‑030](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-030.docx) as an output document of this meeting, as found in [A‑104](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-104.docx), with FG vice-chairman Ramesh Krishnamurthy as the editor.

## Call for submissions

During discussions, it was proposed to produce a call for submissions at this meeting, so as to bootstrap the work of the group.

Document [A‑024](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-024.docx) from FG vice-chairman Marcel Salathé with a draft Call for Proposals on Use Case, Benchmarking, and Data was presented to the group.

* It was noted that the group wants to minimise the administrative burden on potential submitters.
* It was decided to amend [A‑024](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-024.docx), to add a paragraph to reflect that "the FG intends to categorise this proposal according the following categories, you are invited to provide this information (optional)". The form should also outline what the FG intends to do with submissions.

It was agreed that the document that describes what the FG would do should also cover the case when multiple competing submissions are received by the FG.

It was agreed that a deadline for documents to be reviewed at Meeting B should be added to [FGAI4H‑A‑102](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-102.docx); it will be the same deadline as for contributions to Meeting B, i.e. 7 November 2018.

It was agreed to adopt the document as amended as an **output document** of this meeting, as found in [A‑102](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-102.docx), with Marcel Salathé as the editor.

# Future work

## Call for submissions

Experts are invited to submit proposals for the work of the FG using [A‑102](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-102.docx) as a basis in time for the next FG meeting. The deadline is 7 November 2018.

Experts are encouraged to provide additional information in the categories of documents [A‑103](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-103.docx) (data acceptance policy) and [A‑104](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-104.docx) (health requirements), for discussion at the next FG meeting.

## Future meetings

Document [A‑007](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-007.docx) was presented to the group, several clarifying additions were made as found in its [Rev.1](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-007-R1.docx). Table 1 with the draft schedule of future FG meetings was presented. This draft will be updated and experts are invited to **check the FG website for updates**.

The default deadline for document submissions is **one week before the meeting**. For meeting (B), it is 7 November 2018 at 23:59 hours Geneva time.

Table 1 – Draft schedule of future FG meetings (as of 2018‑08‑27)

| Meeting | Date | Venue | Notes |
| --- | --- | --- | --- |
| B | 14‑16 November 2018 | New York city, NY, USA |  |
| C | 22‑25 January 2019 | EPFL, Lausanne, Switzerland | Back‑to‑back with Applied ML Days |
| D | Week of 11 March 2019 (TBC) | China | City TBD, exact dates TBC |
| E | May 29 – June 1, 2019 | Geneva, Switzerland | Back to back with AI for Good Global Summit (28‑30 May 2019) |
| F | September 2019 | Budapest, Hungary | Collocated with ITU Telecom event |

# Promotional activities

It is noted that members of the group are encouraged to use the social media hashtag: #AI4health

It is noted that the ITU would issue guidelines on the use of the FG logo, and logos in general.

## Press release

A press release and other social media postings would be issued by TSB and the management team after the meeting.

NB – See the ITU newslog at [https://news.itu.int/artificial‑intelligence‑health‑call‑proposals/](https://news.itu.int/artificial-intelligence-health-call-proposals/).

# Outcomes of this meeting

As summarized in §10 above, the following output documents were issued:

* [A‑102](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-102.docx): Draft Call for Proposals: use cases, benchmarking, and data
* [A‑103](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-103.docx): Draft criteria for data to be accepted by the Focus Group
* [A‑104](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-104.docx): Draft thematic classification scheme

An updated version of the FG‑AI4H whitepaper was issued ([A‑006](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-006.docx))

# A.O.B.

During various discussions, it was noted that the group should strive for diversity along all dimensions.

# Closing

The meeting closed with remarks from Chaesub Lee, Director of the TSB (ITU), and Lubna Al‑Ansary, Assistant Director‑General (WHO), congratulating the group on the positive achievements of the first meeting and encouraging the experts to continue with the high expectations for the work of the FG‑AI4H. The chairman thanked the participants and the FG vice-chairmen and newly appointed WG vice-chairmen and welcomed their continued support for the very dense schedule ahead. The chairman also thanked the ITU and WHO secretariat for the support that led to the successful conclusion of this first meeting. The chairman thanked the host, WHO, for the kind hospitality.

The meeting closed at 1603 hours CEST on 27 September 2018.

Annex A:  
Terms of reference Working Group O: Operations

|  |
| --- |
| Description |
| This WG addresses operational tasks such as logistics, meetings, agendas, reports, and other aspects that are required for the internal procedures of the FG. |
| ToR |
| Motivation  The focus group tackles a challenging and complex problem by joining artificial intelligence and health ‑ and thus two fields that had been disparate until recently. Several aspects of a wide spectrum of topics have to be addressed and brought together consistently. Therefore, the group is organized along a matrix of work groups and topic areas, where topic drivers cooperate with the WG chairmen. Within a tight timeframe of two years, workshops and meetings will be held at a fast pace around the globe. Against this background, it is of paramount importance that all ongoing processes are operated efficiently, effectively, timely and in a coherent way.  Scope  The WG “operations” addresses operational tasks such as logistics, meetings, agendas, reports, and other aspects that are required for the internal procedures of the Focus Group.  Specific questions to be addressed include:   * How can the different aspects and topic areas be brought together in a streamlined workflow?   Tasks include, but are not limited to:   * Logistics * Supporting the organisation of meetings * Drafting agendas * Writing reports   Deliverables  The WG is to deliver the following documentation:   * Not applicable   Relationships   * Topic drivers (members of FG‑AI4H) for the different topic areas * Chairmen of the other WGs of FG‑AI4H * ITU secretariat * WHO representatives * Workshop hosts (institutions, academy, industry) |

Annex B:  
Terms of reference Working Group HR: Health Requirements

|  |
| --- |
| Description |
| The primary function of WG‑HR is to review the input documents and to make appropriate proposals for further action. |
| ToR |
| The WG‑HR will have the following terms of reference:   * The WG will discuss input documents on health topics. * The WG will assess them for content relevance, and completeness, clarity, availability of depth, quality, and accuracy of datasets from a health perspective. * The WG will use a thematic classification schema to identify the subject area of input documents. * The WG will forward to appropriate WGs to conduct benchmarking of AI‑algorithms through a standardized process, each document will be assigned a Thematic Classification Number (refer to Section 4 of this document). * Declaration of interest will be reviewed and taken into consideration.   Deliverables  The WG is to deliver:   * Proposals for health topics for AI benchmarking * Report of its meetings   Relationships   * Topic drivers (members of FG‑AI4H) for the different topic areas * Chairmen of the other WGs of FG‑AI4H * ITU secretariat * WHO representatives * Workshop hosts (institutions, academy, industry) |

Annex C  
Documentation

| Name | Title | Source |
| --- | --- | --- |
| [FGAI4H‑A‑001](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-001.docx) ‑ [R1](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-001-R1.docx), [R2](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-001-R2.docx) | Proposed agenda of the first meeting ("Meeting A") of the Focus Group on Artificial Intelligence for Health (FG‑AI4H) | Chairman FG‑AI4H |
| [FGAI4H‑A‑002](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-002.docx) | FG‑AI4H Terms of Reference (ITU‑T SG16, 20 July 2018) | TSB |
| [FGAI4H‑A‑003](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-003.docx) | Intellectual property rights (IPR) policy information | TSB |
| [FGAI4H‑A‑004](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-004.docx) | FG‑AI4H management team | Chairman FG‑AI4H |
| [FGAI4H‑A‑005](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-005.docx) ‑ [R1](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-005-R1.docx), [R2](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-005-R2.docx), [R3](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-005-R3.docx) | Proposed working group structure of the Focus Group on Artificial Intelligence for Health (FG AI4H) | Chairman FG‑AI4H |
| [FGAI4H‑A‑006](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-006.docx) | White paper of the Focus Group on Artificial Intelligence for Health (FG‑AI4H) | Chairman, FG‑AI4H |
| [FGAI4H‑A‑007](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-007.docx) ‑ [R1](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-007-R1.docx) | Future meetings – draft plan (save the dates) | Chairman FG‑AI4H |
| [FGAI4H‑A‑008](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-008.docx) | Draft call for submissions (Data & Use Cases) on Artificial Intelligence for Health | FG‑AI4H management |
| [FGAI4H‑A‑009](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-009.pptx) | Summary slides ‑ ITU‑WHO Workshop on Artificial intelligence for health | Chairman FG‑AI4H |
| [FGAI4H‑A‑010](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-010.docx) ‑ [R1](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-010-R1.docx) | Documentation for the FG‑AI4H meeting A (Geneva, 26‑27 September 2018) | Chairman FG‑AI4H |
| [FGAI4H‑A‑011](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-011.docx) | China’s practice on precision medicine based on genome bioinformatics, health data and clinical data fusion | The First Affiliated Hospital of Zhengzhou University |
| [FGAI4H‑A‑012](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-012.docx) | China's smart medical practice in skin diseases | Xiangya Hospital Central South University |
| [FGAI4H‑A‑013](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-013.docx) | Effectiveness and experience sharing in the use of multi‑source heterogeneous clinical data | The First Affiliated Hospital of Zhengzhou University |
| [FGAI4H‑A‑014](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-014.docx) | Effectiveness and experience sharing of AI study on retinal diseases | Peking Union Medical College Hospital |
| [FGAI4H‑A‑015](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-015.docx) | Suggestions on data quality evaluation of AI for health | National Institute of Metrology (China) |
| [FGAI4H‑A‑016](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-016.docx) | Proposal to work on data availability and benchmarking for AI based Depressive Disorder Assistance Service (AI‑DDAS) for teenagers | Hankuk University of Foreign Studies |
| [FGAI4H‑A‑017](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-017.zip) | LS/i: LS reply on AI (Artificial Intelligence)/ML (Machine Learning) and security (from ITU‑T SG17) | ITU‑T SG17 |
| [FGAI4H‑A‑018](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-018.docx) | Predict of diabetes with the help of a deep neural network made from Auto‑encoder | Modirian Research |
| [FGAI4H‑A‑019](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-019.docx) | Appropriate uses of AI in the surgical patient | Fotios Sofiadellis |
| [FGAI4H‑A‑020](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-020.docx) | Towards a potential AI4H use case "diagnostic self‑assessment apps" | Ada Health |
| [FGAI4H‑A‑021](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-021.zip) | WHO Process ‑ Declaration of interest for experts | FG‑AI4H Vice‑chairman |
| [FGAI4H‑A‑022](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-022.pptx) | Tutorial on FG working methods | TSB |
| [FGAI4H‑A‑023](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-023.pdf) | Tackling the snakebite humanitarian crisis: First medical decision‐support tool for snake identification based on AI and global collaborative expertise | University of Geneva |
| [FGAI4H‑A‑024](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-024.docx) | Draft: Call for Proposals: Use Case, Benchmarking, and Data | FG AI4H Vice‑chairman |
| [FGAI4H‑A‑025](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-025.docx) | Defining the medical data space ‑ an approach driven by data type | Andreas Kühn & Henry Hoffmann |
| [FGAI4H‑A‑026](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-026.docx) | Brainstorming ‑ Classification of the healthcare services | Shabbir Syed Abdul |
| [FGAI4H‑A‑027](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-027.pdf) | Running challenges | EPFL |
| [FGAI4H‑A‑028](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-028.docx) | Addition of thematic classification schema for health system challenges | Garrett Mehl, WHO |
| [FGAI4H‑A‑029](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-029.docx) ‑ [R1](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-029-R1.docx) | Brainstorming ‑ Data handling policy | Marc Lecoultre |
| [FGAI4H‑A‑030](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-030.docx) | Draft thematic classification schema | FG‑AI4H Vice‑chairman |
| [FGAI4H‑A‑031](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-031.docx) | Brainstorming ‑ Criteria for data to be accepted by the Focus Group | Markus Wenzel |
| [FGAI4H‑A‑032](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-032.docx) | Classification categories for WHO Publication's process | WHO |
| [FGAI4H‑A‑101](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-101.docx) | Report of FG‑AI4H Meeting A (Geneva, 26‑27 September 2018) | FG‑AI4H |
| [FGAI4H‑A‑102](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-102.docx) | Draft Call for Proposals: use cases, benchmarking, and data | Editor |
| [FGAI4H‑A‑103](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-103.docx) | Draft criteria for data to be accepted by the Focus Group | Editor |
| [FGAI4H‑A‑104](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-104.docx) | Draft thematic classification scheme | Editor |
| [FGAI4H‑A‑105](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-A-105.docx) | Initial working group structure of the Focus Group on Artificial Intelligence for Health (FG AI4H) | FG‑AI4H |

Annex D  
Participants

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