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| ITU Logo | INTERNATIONAL TELECOMMUNICATION UNION**TELECOMMUNICATIONSTANDARDIZATION SECTOR**STUDY PERIOD 2017-2020 | FG-AI4EE-WG1-O-010 |
| **Focus Group on Environmental Efficiency for AI and other Emerging Technologies** |
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| **Title:** | Report of FG-AI4EE Working Group 1 e-meeting, held on 2 March 2021 |
| **Purpose:** | Information |
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| **Keywords:** | Report; FG-AI4EE; WG1 |
| **Abstract:** | This document contains the Report of the Working Group e-meeting held on 2 March 2021. |

# Introduction

Experts of Working Group 1 (WG1) met virtually on 2 March 2021. The draft agenda can be found in document [FG-AI4EE-WG1-I-03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4ee/wg/_layouts/15/WopiFrame.aspx?sourcedoc=%7BB2983F0F-551E-4126-AE9F-156093A8C390%7D&file=FG-AI4EE-WG1-I-033.docx&action=default)9. The agenda was approved without modification.

All documents discussed are available on WG1 SharePoint page at:

 <https://extranet.itu.int/sites/itu-t/focusgroups/ai4ee/wg/SitePages/WG1.aspx>

1.1 Participants

This e-meeting was attended by 17 participants. The final list of participants is available in Annex 1 of this report.

# Opening

FG-AI4EE Working Group 1 Co-Chairman, Joel Alexander Mills opened the meeting and welcomed everyone. The purpose of this e-meeting was to provide update on progress on:

* **D.WG1-09**: *A method for Intuitive Human interaction with data model (ML & AI etc.)* – Leader: Joel Alexander Mills
* **D.WG1-10**: *Guidelines on applying U4SSC KPIs in a digital twin city using ML, AR & AI for better climate mitigation solutions* – Leader: Joel Alexander Mills

**3. Discussion and Summary of inputs**

Joel presented the meeting agenda for the days meeting (see doc [FG-AI4EE-WG1-I-03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4ee/wg/_layouts/15/WopiFrame.aspx?sourcedoc=%7BB2983F0F-551E-4126-AE9F-156093A8C390%7D&file=FG-AI4EE-WG1-I-033.docx&action=default)8) Pierre took the floor to present the status of the report D.WG1-09 A method for intuitive Human iteraction with data model ( ML & AI)

# 3.1 Presentation and status on D.WG1-09 A method for intuitive Human iteraction with data model ( ML & AI) ( see doc [FG-AI4EE-WG1-I-039](https://extranet.itu.int/sites/itu-t/focusgroups/ai4ee/wg/input_wg1/FG-AI4EE-WG1-I-039.docx))

Pierre spoke through the various processes in the prepared technical report. The report shows that an enormous amount of work has been done to store all collected data.

Mei Seok Goh, Graffiquo, Singapore, presented her contribution in the report on how AI and ML have been used in disaster planning and cultural protection, with examples from Southeast Asia.

The report is well on its way to completion. There are still some points that need to be worked out:

* Traffic and public transport
* Building HVAC
* Air quality
* Waste management.

The experts were asked for contributions. The report will be circulated to the experts after the meeting, for comments. The report is available for download on [SharePoint](https://extranet.itu.int/sites/itu-t/focusgroups/ai4ee/wg/SitePages/WG1.aspx) see doc [FG-AI4EE-WG1-I-039](https://extranet.itu.int/sites/itu-t/focusgroups/ai4ee/wg/input_wg1/FG-AI4EE-WG1-I-039.docx)

**Actions for D.WG1-09:**

* **Tony Lee Luen Len** agreed to contribute to the section on building HVAC. Tony to coordinate with Pierre.
* **Pierre Major** will talk to Gary Barnett, AirSensa, for the Air quality section
* **Goeffrey Chemwa** to provide inputs on KPis as per his suggestion during the meeting
* **Rosario Galvan** to provide comments on the section on Civil Defense - and to contribute some definitions including the definition on intuition.
* **Experts** to contribute to the “Traffic and public transport” and “Waste management” section of report D.WG1-09 and contact Pierre Major (pierre@osc.no)with in CC to Joel A. Mills (jam@osc.com) ITU Secretariat tsbfgai4ee@itu.int
* **Authors** to futher develop the recommendations section at the end of the report

# 3.2 Discussion and status on D.WG1-10: Guidelines on applying U4SSC KPIs in a digital twin city using ML, AR & AI for better climate mitigation solutions.

The Techichal report is still slightly behing scheduled. Joel presented the KPIs

Case 1: Predicitive Maintenance

Case 2: Traffic Optimization

Case 3: Smart Building/HVAC

Case 4: Smart Garbage Collection

Case 5: Data park Energy use.

Case 6: Cauayan city Typhoon/flood

Case 7: Crop Prediction

Case 8: Penang City, Heritage control

It will comprise of 4-6 case studies showing examples of projects where emerging technology, such as ML, A​R & AI, has or could have been used to reduce the negative impact of climate change in cities.

This report will be a presenting as video and a report. A guidline of this work will come. It’s recommended to do single cases, because of the difficulty for the expert to find time together for this work.

Mei Seok Goh, Graffiquo, Singapore will take part in this report and and will faciliate a video for Case 6 and 8.

**Decision:**

* It was agreed to organizea a Workshop with video testimonials of the case studies. The Workshop will be hosted by OSC and ITU.

**Actions for D.WG1-10:**

* **Vimal Wakhlu** to work with **Mei Sei Goh** on case study 7 ‘Crop Prediction’
* **Vimal** and **Joel** to coordinate on a paragraph on Farmers case study in India.
* To progress the work on report on D.WG1-10, experts are requested to submit case studies on how ML, AR & AI is being used by cities. Please send your inputs to Joel A. Mills (jam@osc.com ) and Pierre Major (pierre@osc.no) with in CC ITU Secretariat tsbfgai4ee@itu.int

4 Next steps

* Experts to pursue the drafting process on deliverable D.WG1-09. The version of the document will be circulated until 16 March 2021. The plan is to present this report for final approval at the next Focus Group plenary meeting on 08 April 2021.
* Experts to submit case studies on how ML, AR & AI is being used by cities to progress the work on deliverable D.WG1-10.

5 Next e-meeting

 The next meeting on this deliverable will be on **24 March 2021, 14:00 – 15:30 (CET)**

# 6 Other business

No other business.

**Annex 1**

**List of participants**

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| **First Name** | **Last Name** | **Job Title** | **Company** | **Country** |
| Geoffrey | Chemwa | Lecturer | Jomo Kenyatta University of Agriculture and Technology | Kenya |
| Rüdiger | Dr.Iur.Stix,Phd | Hon.Professor & MinR | DX-Danube Excellence | Austria |
| Elinda | Erstad | Assistant CEO & CFO | Augmentcity | Norway |
| José Esteban | Gabarda Balaguer | Research | jose esteban gabarda balaguer | Spain |
| Rosario | Galvan | Sustainable & Inclusive Development | Rosario Galvan | Spain |
| Seok Mei | Goh | CEO | Graffiquo | Singapore |
| Barbara | Kolm | Director, President | Austrian Economics Center | Austria |
| Tony | Lee Luen Len | Partner | Ecosis | Mauritius |
| Markus | Maass | ICT standardisation Industry 4.0 | Federal Network Agency for Electricity, Gas, Telecommunications, Post and Railway | Germany |
| Pierre | Major | Head of research | NTNU Ålesund | Norway |
| Malcolm | Mason | Product Manager | Sure International | UK |
| Joel Alexander | Mills | Chief Executive Officer | Augment City AS | Norway |
| Francois Christian | Nzhie Ngono | CHARGE De MISSION | Consortium d'Appui aux Actions pour la Promotion et le Développement de l'Afrique (CAPDA) | Cameroon |
| Rodrigo | Paula | Technical of Regulation | Agência Nacional de Telecomunicações - ANATEL | Brazil |
| Charlyne | Restivo | FG-AI4EE Advisor | International Telecommunication Union | Switzerland |
| Daniele | Tumietto | Partner | CSQA Certifications | Italy |
| Vimal | Wakhlu |  | ITU-APT Foundation of India | India |