

**DATA FOR REFUGEES (D4R) CHALLENGE  
PARTICIPATION AGREEMENT**

This Agreement is signed by the duly authorized representatives of the below mentioned Parties and effective from 20.4.2018;

- A. Türk Telekomünikasyon A.Ş. having its registered office at Turgut Özal Bulvarı 06103 Aydınlıkevler, Ankara, Türkiye (hereinafter designated as “Türk Telekom”); TTNET A.Ş. having its registered office at Esentepe Mahallesi Salih Tozan Sokak No:16 Karamancılar İş Merkezi D Blok 34394 Şişli-İstanbul (hereinafter designated as “TTNET”); AVEA İletişim Hizmetleri A.Ş. having its registered address at Abdi İpekçi Cad. No:75 34367 Maçka, Şişli – İstanbul (hereinafter designated as “AVEA”)  
and
- B. .... having its registered office at  
.....  
(hereinafter designated as “Participant”)

Under this Agreement, Türk Telekom, TTNET, and AVEA together called “TTG”, ..... will be called as “Participant”, and both TTG and Participant collectively referred to as the "Parties" and each individually as “Party”.

TTG provides a special database to the scientific committee to enable research on refugee movements and to ultimately help the authorities in providing better conditions to refugees. The sharing requirements and the type of data that is to be shared will be determined solely by TTG. Access to this database is only possible by taking part in the “Data for Refugees” Challenge. Through the studies made with this special database, TTG aims to support the studies that will create better conditions for refugees in areas such as health, education, security, unemployment, integration and also to support the outreach programs for refugees carried by the administrative bodies.

Participants that contribute to the Challenge will aim to analyze information from the special database that is provided exclusively to them by TTG. The results of these studies will be shared with TTG in a report, with an explanation on the possible benefits of these outcomes to the refugees. The results that fulfill the Committee’s criteria will be awarded.

The Participant undertakes and agrees to be bound by the following conditions in order to take part in the Challenge. Participant has to send a signed copy of this Agreement by electronic mail to the electronic mail address mentioned on the Challenge website.

By signing this Agreement, the Parties undertake to comply with the terms and conditions below.

## Article 1- Definitions

- 1.1. "**Affiliated Scientist**" shall mean any person or entity who is employee of the Participant or who is directly affiliated to the Participant within the framework of its research and studies by contract or not, or as a student. The names of the Affiliated Scientists participating in the Challenge are listed at the end of this document.
- 1.2. "**Applicable Law**" shall mean the relevant laws, regulations and other legislative acts that applies to this Agreement, such as Turkish Personal Data Protection Law No. 6698 and Turkish Electronic Communications Law No. 5809.
- 1.3. "**Awards**" shall mean the prizes that will be granted to Participants whose Results are selected by the Committee.
- 1.4. "**Challenge**" shall mean the contest in which Participants aim to create a project for benefit of the refugees and supporting administrative bodies through the analysis of a special database that consists of anonymized mobile telecommunication data of refugees, Turkish citizens, and other TTG customers.
- 1.5. "**Committee**" shall mean the entity composed of scientists and various personalities from national and international organizations and aims to evaluate the Results in terms of ethics, benefits and data security. The names of the Committee members are mentioned on the Challenge website.
- 1.6. "**Copyrightable Results**" shall mean the elements of the Results that are or will be protected by intellectual property rights, such as software and algorithms.
- 1.7. "**Data**" shall mean the database containing phone calls from mobile users of TTG made between January 2016 and January 2017. Data have been anonymized and aggregated by TTG and are made available to the Participant for the sole and limited purpose of the Challenge, pursuant to criteria described in Annex-1 of this Agreement. Under the scope of the Challenge, the anonymized data are going to be used for the purposes of research and statistics. Multiple special databases have been prepared for this Challenge.
- 1.8. "**Participant**" shall mean any legal person or entity, which applies to the Challenge with its authorized body to present a non-profit study made by Affiliated Scientists. Independent natural persons can also apply as Participant.
- 1.9. "**Result**" shall mean the submitted written document handed over by the Participant to TTG containing the solutions proposed by the Participant within the framework of the Challenge. On the

basis of this document and its content, the Committee will determine the winners of the Challenge. Results may contain tables, maps, and graphics.

## **Article 2- Entitlement to Participate in Challenge- Offer and Award**

- 2.1. In order to be able to participate in the Challenge, Participant has to be (i) an academic university / faculty and/or a scientific research institution (or an entity having an equivalent status) or (ii) a non-profit entity or (iii) a legal person representing a non-profit organization or (iv) individual and independent research group or (v) the research division of a commercial or industrial entity that requests the data for a non-commercial purpose. If the Participant's application is accepted, a unique access key will be sent to the Participant in order to enable the downloading of Data located on a web server.
- 2.2. Participant agrees, declares and undertakes to use reasonable efforts and utmost care to carry out research in compliance with the objectives of the Challenge, especially regarding processing and protection of Data. Participant must submit its contribution by the deadline announced on the Challenge web page. Participant agrees that only Affiliated Scientists have access to Data, and upon completion of the Challenge, and the submission of related reports and publications, Participant agrees to destroy and completely remove Data from its servers and other storage facilities, and ensures that the Affiliated Scientists will do likewise.
- 2.3. By submitting to this Challenge, Participant agrees to comply with all applicable laws, including, but not limited to statutes, statutory decrees, international agreements, decisions/regulations issued by competent authorities and all relevant announcements, statements and briefings made by TTG. In case of non-compliance, Participant agrees, declares and undertakes to be exclusively liable of all legal, administrative and penal sanctions. In case of the non-destruction, storage, transmission, or processing of Data and related information, legal, administrative and criminal liability shall be solely with the Participant.
- 2.4. TTG shall have the right to unilaterally terminate this Agreement at all times via sending a notification email to the Participant in case one of the following events occur,
  - (i) as a result of a change in legislative regulations; or
  - (ii) if the continuation of the Challenge is, in TTG's opinion, no longer viable; or,
  - (iii) if Participant breaches the terms and conditions of this Agreement.

In this case, the Participant will irreversibly destroy the all Data and Data-related results from all stored spaces within one week of receipt of the termination notification email without further notice. Such destruction records will be submitted to TTG.

- 2.5. The Committee will define and announce the winners of the Challenge. Awards will be given in five categories, and TTG preserves the right not to grant an Award in any of these categories:
  - (i) 1st prize: Safety and Security Category
  - (ii) 1st prize: Health Category
  - (iii) 1st prize: Education Category
  - (iv) 1st prize: Unemployment Category

(v) 1st prize: Integration Category

2.6. Participant acknowledges that Committee possesses the sole authority to define the winners, according to its own selection criteria and that TTG does not possess any significant influence over the Committee's authority, and that under no circumstance it shall hold TTG responsible for Award selection process. In this respect, the Participant hereby declares that it will not object to the results of the Challenge, and that such objection will constitute material breach of this Agreement. In such a case, TTG shall keep all its statutory and contractual rights reserved.

### **Article 3- Confidentiality**

3.1. Participant shall keep Data and all other information disclosed by TTG for the purposes of the Challenge confidential. For protection of Data, Participant undertakes to apply at least the same degree of care with which it treats and protects its own confidential information against public disclosure, but not less than a reasonable degree of care. The "reasonable care" must contain all necessary measures to provide the Data protection at the same level as predicted in Turkish Law No. 6698 and Turkish Law No. 5809. The "reasonable care" shall ensure a level of protection according to TS ISO/IEC 27001 and/ or ISO/IEC 27001 standards or current ISO safety standards.

3.2. All Data and information shall be disclosed on a need-to-know basis. Data and other information shall not be disclosed to any third party without prior written consent of TTG. Participant shall irrevocably and accurately limit the use and access to Data to Affiliated Scientists only. Participant acknowledges that any disclosure of information (including but not limited to Data) to any unauthorized person shall constitute a material breach of this Agreement and violation of the applicable law and that it shall take all reasonable measures to prevent such disclosure. Participant is authorized and commissioned to take all necessary measures to prevent any unauthorized access and therefore, in such a case, Participant is exclusively responsible from any legal, administrative, and penal liability that might occur.

3.3. Participant is obliged to inform all persons that have conduct with the Data about Data confidentiality and the limited usage of Data, meaning the usage being limited to the actualization of the purposes of Challenge. Participant agrees to be liable for violation of Applicable Law and this Agreement by all entities that have conduct with the Data. The degree of liability shall be objective (strict) liability and under the scope of commitment of a third party's action. It is agreed by both Parties that in such a case TTG has the right and authority to directly appeal to Participant for compensation of all damages it endures due to actions of these entities and recourse all kind of payments made to third parties and public authorities such as compensation, penalty etc. TTG keeps all its statutory and contractual rights reserved.

3.4. Participant is responsible of making necessary notifications about confidential information to Affiliated Scientists and other authorized entities and to make sure that they shall also act in compliance with the confidentiality provisions in this Agreement. Participant shall not disclose Data or any other information partially or wholly to any other party.

3.5. Participant shall be responsible for all losses, damages and demands and other legal, administrative, and penal liabilities that occur as a result of the actions of the Affiliated Scientists related to the

Challenge and the use of Data. The Participant accepts that any kind of monetary sanction (administrative fine, compensation etc.) that TTG confronts with due to gross negligence or unlawful intent of Participant and/or the Affiliated Scientists shall be immediately recouped to Participant.

3.6 Participant shall be solely responsible for all losses, damages, demands and other legal, administrative, commercial and penal liabilities from relevant legislations that occur use of data out of purposes or use of unauthorized data.

#### **Article 4- Consequences of Termination**

4.1. This Agreement becomes effective upon its execution date and remains in force until the official announcement of the Challenge Awards. Upon the announcement of the Awards, this Agreement automatically terminates without any notice. For the avoidance of doubt, the official announcement of the Award winners may be made via project web-site or in a special ceremony or during an international event. Participant, without prejudice to being awarded or not, must destroy all Data that is granted within the scope of the Challenge within one week starting from the official announcement of the Award winners. All records regarding the destruction of Data shall be submitted to TTG. Further Data usage, for instance for scientific publications directly related to the Challenge, will be explicitly requested from TTG and evaluated on a case by case basis.

4.2. The obligations of the Participant under Article 3 (“Confidentiality”) shall survive the termination of this Agreement.

4.3. After the termination of this Agreement, both Parties shall immediately cease to use the confidential information (including, but not limited to Data) and intellectual property rights that belong to the other Party, if any.

#### **Article 5- Restriction of use – Restitution**

5.1. Participant agrees to use the Data only for the purposes of the Challenge and only until the official announcement of the Award Winners. As clearly stated on the Article 4.1., Participant is obliged to destroy all Data within one week starting from the date of the official announcement of the Award winners. Any other use of Data of any nature outside the scope of the Challenge by Participant and/or Affiliated Scientists or any other entity is submitted to the following conditions;

5.2. Participant can apply for an extension of the right to use Data after the announcement of the Awards only in order to proceed to additional scientific analysis and researches. To do so, Participant will have to send a written application to TTG within one week starting from the date of the official announcement of the Awards. The written application must contain the scope of the new research Participant intends to carry out, the reason of the usage of Data and the time period of the usage. TTG has no obligation to accept this application and Participant has no right to object to TTG’s decision in this respect.

5.3. Usage of Data shall only be permitted exclusively for non-profit purposes. In other words, Data cannot be used for commercial purposes. Participant accepts in advance that any application that indicates commercial use of Data shall not be accepted by TTG and that any kind of unauthorized commercial use of Data shall constitute material breach of this Agreement. In such case, TTG shall exercise all

its statutory and contractual rights, including, but not limited to, penal clause and immediate termination without any notice. In addition to that, Participant shall be exclusively responsible of any legal, administrative and penal liabilities that caused by commercial use of Data.

5.4. Participant is obliged to mention Data origin in all studies that use the Data. In other words, Participant must mention that Data was made available by TTG within the framework of the Data 4 Refugees Challenge, and cite the related work as described on the Challenge website.

## **Article 6- Intellectual Property Rights**

6.1. Parties agree that all the Data made available for the purposes of this Agreement are deemed the property of TTG.

6.2. Nothing in this Agreement shall be deemed to grant a license directly or by implication of any intellectual property rights related to the Data, except the limited and nontransferable right to use such Data for till the end of Challenge.

6.3. This Agreement shall not be deemed to create any obligation for either Participant or TTG to enter into any further contractual arrangement of any kind.

6.4. Copyrights of the Copyrightable Challenge Results will be property of Participant and Affiliated Scientists.

## **Article 7- Results**

7.1. Participant presents its Results to TTG in a project report format and on the condition of having TTG's previous written consent for each Result, Participant may publish the Results in scientific papers or conference presentations. Apart from that, TTG can also announce the Results in Award ceremony, or enable public access to the Results via publishing them in scientific and commercial broadcasts/exhibitions/conferences. TTG undertakes to refer to and give credit to Participants project reports in any such publications. The Committee evaluates the reports, and can decide that the report is publishable, non-publishable due to sensitive parts, or publishable with amendments.

7.2. Upon written prior permission by TTG, Participant may use and publish the Results, including Copyrightable Results, after the official announcement of Awards. A copy of any material proposed for publication must be submitted to TTG prior to publication. TTG shall make its best efforts to make a decision as soon as possible. In case TTG does not make any response, application is deemed to be automatically declined after 30 work days of the date of the application of permission. In case the permission is granted by TTG, Participant can start the publishing procedures.

7.3. Participant undertakes to refer to the Challenge when it uses and/or publishes the Results as following: "This study is performed using the one-year anonymized mobile communication data made available by Türk Telekomünikasyon A.Ş. within the D4R Challenge," followed by the scientific reference indicated on the Challenge website.

7.4. For the avoidance of doubt, the intellectual property rights in all software, information, technology or data whatsoever supplied or made available by TTG to the other party under this terms and conditions shall remain the property of TTG. Except as expressly set out in this Agreement, neither party grants to the other any license, sub-license or other right in or to such intellectual property rights.

#### **Article 8- Applicable Law-Jurisdiction**

8.1. This Agreement shall be governed and construed as per Turkish law and the Parties agree that Istanbul (Caglayan) Courts and Execution Offices shall have jurisdiction over the disputes arising from this Agreement.

#### **Article 9- Miscellaneous**

9.1. Participant must provide all necessary security measures required by the applicable law. TTG shall be responsible for ensuring that the transfer of Data under these conditions conforms to applicable laws.

9.2. Neither this Agreement nor any rights granted hereunder shall be assignable or otherwise transferable without the prior written consent of the other Party.

9.3. No waiver or modification of this Agreement will be binding upon the Parties unless made in writing and duly signed by an authorized representative of each Party and no failure or delay in enforcing any right, authority or privilege will be deemed a waiver.

9.4. In the event that any of the provisions of this Agreement shall be held by a court or other tribunal of competent jurisdiction to be unenforceable, the remaining provisions hereof shall remain in full force and effect. In such case, the Parties shall cooperate, through negotiations in good faith, to replace any part of the Agreement hereto so held to be invalid or unenforceable with a legally binding, effective, and applicable provision.

9.5. Notwithstanding Article 9.3., TTG can unilaterally modify the provisions of this Agreement and Annex -1 any time where such modification is estimated necessary, due to result of a change in applicable law or decisions of competent authorities, and other situations where a modification is required as essential by TTG. For the avoidance of doubt, the Parties agree that TTG has the authority to change the type of Data that are to be shared with Participants under the scope of this Challenge at any time and Annex-1 does not constitute a commitment regarding the type of Data. Participant and Affiliated Scientists agree, declare and undertake to act in compliance with the unilateral changes made by TTG, and to be liable of any kind of legal and criminal liabilities, including, but not limited to any loss, damage and administrative fines and other claims made by third parties directed at TTG in case of non-compliance. In case TTG makes any payment to a third party due to non-compliance of Participant, the paid amount with all its ancillaries shall be recouped to Participant and the Participant shall pay this amount within two weeks starting from the date of notification without any further notice. In case of late, partial or non- payment, all statutory and contractual rights of TTG shall be reserved.

IN WITNESS WHEREOF, this Agreement is hereby duly executed by the duly authorized representatives of the Parties in 2 (two) copies on .././.... and each Party receives 1 (one) copy.

[Participant title and name]:

[Participant signature]:

[Date and place of signature]:

[Participant email]:

[Participant phone number]:

Names, emails and signatures of all Affiliated Scientists with access to Data (add as many rows as necessary):

<b>Affiliated Scientist Title and Name</b>	<b>E-mail</b>	<b>Signature</b>



# Annex - Description of Data

## Data

For this challenge, three CDR (Call Detail Record) datasets will be made available by Türk Telekom, together with two files on cell tower locations.

The datasets will include one year of mobile CDR data, collected between January 2017 – December 2017. All datasets will be stored in plain text format.

### Base Transceiver Station locations

The geographical coordinates (longitude, latitude) of the mobile network antennae are given (BTSs - Base Transceiver Stations). It should be noted that several BTSs may be co-located. Each line of this file contains the BTS ID, and a district ID, for the district where the antenna is located. Each district may contain several antennae.

### District locations

For coarse mobility data, we do not provide individual base stations, but only district information. There are 971 districts (or prefectures) in Turkey. We use the official districts as used in the elections. The base stations included in the dataset are collected in approximately 481 districts across the country. The rough geometric center of each district will be provided separately.

### Dataset 1: Antenna traffic

One year site-to-site traffic on an hourly basis. This dataset contains the traffic between each site for a year. The file `Veri_Seti1_201701` (i.e. `Dataset_1_2017_01`, indicating dataset type, collection year and month) contains monthly voice traffic between sites and is structured as follows:

**timestamp:** day / hour formatted as YYYY-MM-DD HH (rounded up to hours, HH from 1 to 24)

**outgoing\_site\_id:** id of site the call originated from

**incoming\_site\_id:** id of site receiving the call

**total number of calls:** the total number of calls between these two sites during this hour

**number of calls originated from refugees:** the number of calls originated from numbers with refugee status.

**total call duration:** the total duration of all calls between these two sites during this hour.

**total call duration originated from refugees:** the total duration of calls between these two sites during this hour originating from refugee IDs.

For example:

```
timestamp,    outgoing_site_id,    incoming_site_id,...    ...number_of_calls,
refugee_calls, total_call_duration, refugee_call_duration
2013-04-01 00,2,2,7,1,138,20
2013-04-01 00,2,3,4,0,136,0
2013-04-30 23,1659,608,0,1,0,3601
```

Similarly, the file `Veri_Seti1_SMS_201701` contains monthly text traffic between sites and are structured as follows:

**timestamp:** day and hour considered in format YYYY-MM-DD HH (rounded up to hours, HH from 1 to 24)

**outgoing\_site\_id:** id of site the SMS originated from

**incoming\_site\_id:** id of site receiving the SMS

**number of SMS:** the total number of SMS messages between these two sites during this hour

**number of SMS originated from refugees:** the number of SMS originated from numbers with refugee IDs.

### Dataset 2: Fine grained mobility

This dataset will provide the cell tower identifiers used by a group of randomly chosen active users to make phone calls and send texts. The data will be timestamped and a particular group of users will be observed for a period of 2 weeks. At the end of the two-week period, a fresh sample of active users will be drawn at random. Each sample contains 3% of the refugee base plus equal amount of non-refugee users. To protect privacy, new random identifiers are chosen in every time period. Time stamps are rounded to the minute.

The phone numbers for these users are removed, and each one is assigned a unique random number instead. These numbers will start with 1 for refugees, 2 for non-refugees, 3 for unknown. However, this indicator should be considered to be somewhat noisy. Among the users who are marked as refugees, there may be customers who are

not refugees, and vice versa. Consequently, it will not be possible to say with 100% certainty whether an invitation CDR belongs to a refugee or not. There is no identifying information about the other party of the call; only the area code (1: refugee, 2: not refugee, 3: unknown) is given.

It should be noted that there are multiple mobile operators for each region. Therefore, the number of phone calls and conversations do not represent actual total numbers, although they are indicators of the total amount of conversations of the region. Numbers of -99 or 9999 are given for missing antenna information, for instance if the other party uses a different operator.

Monthly voice traffic between the areas are stored in the form of Veri\_Seti2\_201701W\_In / Out for VOICE and in the format of Veri\_Seti2\_201701W\_SMS\_In / Out for SMS. These are structured as follows:

**caller id:** randomly assigned value, prefixed with digit indicating refugee status (1: refugee, 2: non-refugee, 3: unknown)

**timestamp:** day / hour considered in format YYYY-MM-DD HH:MM (rounded up to minute)

**callee prefix:** 1: refugee, 2: non-refugee, 3: unknown

**site\_id:** id of site recording the call

**call type:** 1 for outgoing, 2 for incoming

If incoming SMSs come from the 9333 service or from different SMS services and applications, the dialed area code is given as 3: unknown.

For example:

```
caller id, timestamp, callee prefix, site id, call type
1138, 2013-04-01 12:32, 1, 52, 1
309095, 2013-04-01 12:33, 3, -1, 2
```

### **Dataset 3: Coarse grained mobility**

In this dataset, the trajectories of 50,000 randomly selected refugees and 50,000 randomly selected non-refugees are provided for the entire observation period, but with reduced spatial resolution.

The spatial resolution is reduced by replacing antenna identifiers with broader area identifiers, called districts, or prefectures. The map of Turkey is divided into 971 districts officially, our dataset contains data from 481 districts.

The files of the dataset are split into 12 monthly accumulated files. Veri\_Seti3\_201701\_In/Out will contain records of the form:

**caller id:** randomly assigned value, prefixed with digit indicating refugee status (1: refugee, 2: non-refugee)

**timestamp:** day / hour considered in format YYYY-MM-DD HH:MM (round up to minute)

**prefecture\_id:** id of prefecture recording the call

For example:

```
caller id, timestamp, prefecture id,
1138, 2013-04-01 12:32, 167
209095, 2013-04-01 12:33, 23
176202, 2013-04-01 12:33, 75
```