WITS HEALTH CONSORTIUM DATA TRANSFER AGREEMENT (RP2) WITH TRACKED CHANGES

LEGEND

Red strikethrough text = deleted text
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DATA TRANSFER AGREEMENT

ENTERED INTO BY AND BETWEEN

[PROVIDER LEGAL NAME, DESCRIPTION OF ENTITY AND ADDRESS DETAILS]

(hereinafter "the Data Provider") and

Wits Planetary Health Research Division a Division of Wits Health Consortium (Pty) Ltd

Registration Number: 1997/15443/07

31 Princess of Wales Terrace, Parktown, Johannesburg, 2193, South Africa (hereinafter "the Data Recipient")

WHEREAS:

- i. The Data Provider collected certain Original Study Data (as defined below) under the following studies:
 - a. Project 1: [Title of Project to be inserted]
 - b. Project 2: [Title of Project to be inserted]
- ii. The Data Recipient is a member of the HE²AT Center Consortium carrying out the research project titled "Developing Data Science Solutions to Mitigate the Health Impacts of Climate Change in Africa: the HE²AT Center" ("HE²AT Project") which is funded by the National Institutes of Health (NIH).
- iii. The Data Recipient has requested the Data Provider to transfer the Original Study Data collected by the Data Provider for the study in (i) above for purposes of the Data Recipient using the Original Study Data in the HE²AT Center Research Project 42, titled:

"Individual Participant Data meta-analysis to quantify the impact of high ambient temperatures on mater

machine learning and multi-source data analysis towards the development of an urban heathealth Early Warning System for African cities" ("RP42 Study") the details of which are set out in **Annexure** "B" attached hereto.

- iv. The Data Provider has agreed to provide the Original Study Data as set out in **Annexure "A"** hereto.
- v. The Parties agree that the transfer of the Original Study Data will be done in accordance with the terms and conditions of this Agreement.

THEREFORE, THE PARTIES AGREE AS FOLLOWS:

1 DEFINITIONS

In this Agreement, unless the context otherwise indicates, the following words will have the following meanings:

- 1.1 "the/this Agreement" shall mean this Agreement together with any Annexures hereto;
- 1.2 "Commencement Date" shall mean the date on which this Agreement shall become effective and binding upon the Parties and shall be the date of signature of the last Party to sign this Agreement;
- 1.3 "Responsible Party" means a public or private body or any other person which, alone or in conjunction with others, determines the purpose of and means for Processing Personal Data;
- 1.4 "Original Study Data" shall mean the health-related data listed in Annexure "A" hereto and any other data actually transferred by the Data Provider to the Data Recipient under this Agreement;
- 1.5 "Data Protection Legislation" shall mean any data protection or data privacy laws as may be applicable, including but not limited to POPIA, the Electronic Communications and Transactions Act 26 of 2005, the Consumer Protection Act 68 of 2008, and the General Data Protection Regulation (GDPR);
 - 1.6 "Data Subject" means the person to whom Personal Data relates;
- 1.7 "RP+2 De-identified Data" means data with the following information deleted; (1) information that identifies the Data Subject, (2) information that can be used or manipulated by a reasonably foreseeable method to identify the Data Subject or, (3) information that can be linked by a reasonably foreseeable method to other information that identifies the Data Subject;
- 1.8 "HE²AT Center Data Management Plan" means the data management plan applicable to the RP¹2 Study as may be amended and updated from time to time by the HE²AT Center Consortium;
- 1.9 "HE²AT Center Consortium" means the consortium members jointly working on the HEAT Center Project, as listed in Annexure "C", as may be amended from time to time;
- 1.10 "Core HE²AT Center Data Management Team" a group of vital personnel within the HE²AT Center Consortium responsible for the initial processing, harmonisation and integration of the Original Study Data;

- 1.11 "Parties" shall mean the parties to this Agreement, namely the University of Cape TownWits Health Consortium (Pty) Ltd and [provider institution]; and the term "Party" shall refer to either of them;
 - 1.12 "person" means a natural or juristic person;
- 1.13 "Personal Data" means any information relating to an identifiable, living, natural person, and where it is applicable, an identifiable, existing juristic person;
- 1.14 "Processing" (or its conjugates) shall mean any operation or set of operations, which is performed upon Personal Data, whether or not by automatic means, such as collection, recording, organization, storage, adaptation or alteration, retrieval, consultation, use, disclosure by transmission, dissemination or otherwise making available, alignment or combination, blocking, erasure or destruction;
- 1.15 "Operator" means a person who processes Personal Data for a Responsible Party in terms of a contract or mandate, without coming under the direct authority of that party;
- 1.16 "HE²AT Project" shall mean the project entitled "Developing Data Science Solutions to Mitigate the Health Impacts of Climate Change in Africa: the HE²AT Center" funded by the National Institutes of Health;
- 1.17 "RP12 Study" shall mean the specific study under the HE²AT Project titled:

 "Individual Participant Data meta-analysis to quantify the impact of high ambient temperatures on mater machine learning and multi-source data analysis towards the development of an urban heathealth Early Warning System for African cities" as more fully described in Annexure "B" attached hereto;
- 1.18 "RP±2 Study Data" shall mean all data resulting from processing of the Original Study Data during the RP±2 Study, which includes but is not limited to, RP±2 De-identified Data and Consortium Shared Data;
- 1.19 "POPIA" shall mean the South African Protection of Personal Information Act 4 of 2013 and regulations as amended from time to time;
- 1.20 "Consortium Shared Data" means data that has undergone, initial processing, harmonisation and integration and includes, amongst other variables, a limited set of indirect identifiers that are required for the purposes of conducting the RP±2 Study analysis as described in Annexure "B".
- 1.21 "Azure Cloud Platform" means the Microsoft Azure cloud computing service that will serve as the HE²AT Center Primary Repository.
- 1.22 "Cloud Migration" means the process of transferring the Original Study Data and any derived data sets from the existing on-premises infrastructure to the Azure Cloud Platform.
- 1.23 "Data Access Committee or DAC" means the committee established by the HE²AT Center to review and approve data access requests from external researchers according to established criteria and protocols, which shall continue to function after the conclusion of the HE²AT Center Project.
- 1.24 "Data Access Levels" means the tiered access system implemented by the HE²AT Center consisting of:
 - Level 0: Original Study Data Raw, unprocessed data with restricted access to Core Data Team only

- Level 1: Consortium Shared Data Processed data shared only among HE²AT Center Consortium partners
- Level 2: RP2 De-identified Data Retained by HE²AT Center for approved external researcher access
- Level 3: Inferential Data Aggregated and anonymized data available for open access
- 1.25 "Extended Research Use" means the use of data derived from the Original Study Data by External Researchers for scientific research purposes that may extend beyond but remain consistent with the original aims of the HE²AT Center Project.
- 1.26 "External Researcher" means any qualified researcher who is not a member of the HE²AT Center Consortium but who has been approved by the Data Access Committee to access Level 2 data for specific research purposes.
- 1.27 "Geo-Distributed Storage Architecture" means the cloud architecture that enables data storage in specific geographic regions in compliance with applicable data protection laws.
- 1.28 "Post-Project Data Repository" means the secure data repository that will maintain and govern access to the data after the conclusion of the HE²AT Center Project.
- 1.29 "Post-Project Data Use" means the continued storage, access, and use of the data after the conclusion of the HE²AT Center Project in accordance with this Amendment.
- 1.30 "Successor Governance Entity" means any entity or institution that assumes responsibility for the governance, maintenance, and oversight of the Post-Project Data Repository after the conclusion of the HE²AT Center Project.
- 1.31 Words importing the singular shall include the plural and *vice versa*, and words importing the masculine gender shall include females. The head notes to the clauses to this Agreement are inserted for reference purposes only and shall not affect the interpretation of any of the provisions to which they relate.

2 TRANSFER AND USE OF DATA

- 2.1 This Agreement shall commence on the Commencement Date and shall terminate on completion of the HE²AT Projectremain in effect in perpetuity with respect to the Post-Project Data Use provisions set forth in Section 2.12 of this Amendment, unless terminated earlier in accordance with the provisions of this Agreement. The Data Provider specifically acknowledges and agrees that the Post-Project Data Use provisions shall survive the termination of the HE²AT Center Project.
- 2.2 Either Party may terminate this Agreement prior to the completion of the HE²AT Project by providing 30 (thirty) calendar days' prior written notice to the other Party. On early termination of this Agreement, the Data Recipient shall, where possible, immediately discontinue use of the Original Study Data and upon the Data Provider's instructions, either return all copies of same to the Data Provider, destroy all copies of the Original Study Data, or deal with the Original Study Data in any other manner requested by the Data Provider. Data Provider acknowledges that the ability to retrieve or delete Original Study Data already incorporated into the RP±2 Study Data may be limited due to (1) this being impractical or impossible, (2) the need to maintain the integrity of the RP±2 Study Data or (3) legal,

operational, or regulatory requirements in accordance with applicable law. Where deletion is not possible, the Data Recipient shall, where practicable, anonymize or pseudonymize the Data to minimize any potential risks associated with its retention. The Data Recipient shall inform the Data Provider of any such measures taken.

- 2.3 Each Party shall pay its own costs incurred in the performance of this Agreement. Any given expense or cost can only be committed in writing by the Party responsible for the cost in question. In no case can one Party commit an expense on behalf of another Party, without prior written consent.
- 2.4 Data Provider retains ownership of the Original Study Data and retains all rights to distribute the Original Study Data to other third parties.

This expanded license does not transfer ownership of the Original Study Data, which remains with the Data Provider.

- 2.5 The Data Provider acknowledges and agrees that initially the Original Study Data shall be accessible only to the Core HE²AT Center Data Management Team for purposes of pre-processing, harmonisation and integration to produce Consortium Shared Data as set out in the HE²AT Center Data Management Plan. Following the Cloud Migration, the Original Study Data will be classified as Level 0 data in the Azure Cloud Platform's tiered data access system and will remain accessible only to the Core Data Team.
- 2.6 The Data Recipient is hereby authorised to transfer and/or share the Consortium Shared Data with the HE²AT Center Consortium members for purposes of conducting the RP±2 Study.
- 2.7 The authorization in clause 2.6 above is subject to HE²AT Center Consortium members entering into a Data Transfer Agreement on terms no less restrictive than the terms as provided for herein.

3 NEW PROVISIONS

- 2.19 Cloud Storage Infrastructure and Data Migration Authorization
 - 2.19.1 The Data Provider hereby irrevocably authorizes the Data Recipient to:
 - (a) migrate the Original Study Data from on-premises infrastructure to the Azure Cloud Platform;
 - (b) store and process the Original Study Data and all derived data sets in the Azure Cloud Platform; and
 - (c) implement the tiered Data Access Levels system described in this Amendment.
 - 2.20 External Researcher Access Authorization
- 2.20.1 The Data Provider hereby explicitly and irrevocably authorizes and grants permission for appropriately de-identified data derived from the Original Study Data (Level 2 Data) to be made available to External Researchers who are not members of the HE²AT Center Consortium, subject to the following conditions:
 - (a) All External Researcher access requests must be reviewed and approved by the Data Access Committee.
 - (b) External Researchers must sign a legally binding Data Use Agreement.

- (c) External Researchers must commit to appropriate citation of both the HE²AT Center and the original data sources.
- (d) External Researchers will only have access to Level 2 data (de-identified).
- (e) All External Researcher access will be monitored and logged.
- (f) The Data Access Committee shall maintain the right to revoke access for any External Researcher.
 - 2.21 Post-Project Data Use and Long-Term Data Retention Authorization
- 2.21.1 The Data Provider hereby explicitly and irrevocably authorizes and grants permission that the data derived from the Original Study Data shall be retained and may continue to be used beyond the conclusion of the HE²AT Center Project as follows:
 - (a) Level 0 Data (Original Study Data): Shall be retained for a period of 5 (five) years.
 - (b) Level 1 Data (Consortium Shared Data): Shall be retained for a period of 10 (ten) years.
 - (c) Level 2 Data (De-identified Data): Shall be retained indefinitely as a scientific resource.
 - (d) Level 3 Data (Inferential Data): Shall be retained indefinitely as an open scientific resource.

4 GENERAL

- 12.1 In no event shall Data Provider be liable for any use by the Data Recipient of the Original Study Data or for any loss, claim, damage, or liability, of any kind or nature, that may arise from or in connection with this Agreement or Data Recipient's use, handling, or storage of Data.
- 12.2 This Agreement does not constitute, grant nor confer any license under any patents or other proprietary interests of one Party to the other, except as explicitly stated in this Agreement.
 - 12.3 This Agreement may be amended by written agreement between the Parties.
- 12.4 This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. A signed copy of this Agreement delivered by electronic transmission shall be deemed to have the same legal effect as delivery of an original signed copy of this Agreement.
- 12.5 The provisions of this Agreement that by their nature are intended to survive termination or expiration of the Agreement shall survive such termination or expiration and shall remain in full force and effect.
- 12.6 The Parties expressly acknowledge and agree that the provisions of Sections 2.20 and 2.21 of this Amendment regarding External Researcher Access and Post-Project Data Use shall survive the termination of the Agreement and the conclusion of the HE²AT Center Project.
- 12.67 The Data Recipient hereby acknowledges and accepts that the signatory of this Agreement on behalf of the Data Provider represents and warrants that they have the full authority and capacity to enter into and bind the Data Provider to the terms of this Agreement. The Data Recipient shall not be held liable or responsible in any manner for any

breach of authority or lack thereof by the signatory. Should it be determined that the signatory did not possess the requisite authority to execute this Agreement, the Data Recipient shall remain indemnified and free from any and all claims, liabilities, losses, damages, or expenses arising therefrom.

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the Amendment Effective Date.

DATA PROVIDER	DATA RECIPIENT
	WITS HEALTH CONSORTIUM
(signature)	(signature)
Name:	Name:
Title:	Title:
Date:	Date:

ANNEXURE A: DESCRIPTION OF DATA

The list of variables below is indicative. Based on data availability and relevance, the final variable list shall be finalized and recorded between the Data Provider and Data Recipient.

Data Source 1

- Project Title: [Full research project title]
- Funder: [Original research funding details]

Data to be transferred: Individual participant data for a limited set of variables from the original dataset/s relating to urban heat exposure and its health impacts on vulnerable populations in African cities.

Dataset includes these important variables:

Essential variables:

- Unique ID (study ID and participant ID)
- Date of health event (e.g., hospitalization, mortality)
- Location, at a minimum: city of event or follow-up (data on the location of household, health facility, or study clinic are preferable)

Health outcomes (indicative list):

- Heat-related illness or hospitalization
- Cardiovascular events (e.g., heart attack, stroke)
- Respiratory conditions exacerbated by heat
- Mortality (including cause of death)
- Admissions to intensive care units
- Chronic disease exacerbations (e.g., diabetes, hypertension)

ANNEXURE B: DESCRIPTION OF STUDY

Study title: Innovative Machine Learning and multi-source data analysis towards the development of an urban heat-health Early Warning System for African cities

Study rationale: African cities are experiencing rapid urbanization and significant increases in temperatures due to climate change, with dire health implications for vulnerable populations. However, data and understanding of heat-health outcomes, exposure, vulnerability, and potential solutions in these urban contexts are critically lacking. This study seeks to fill these gaps by leveraging advanced data science techniques to map and predict urban heat-health risks and inform public health interventions.

Study objectives: The study's overall objective is to use innovative data science approaches to quantify the impact of heat exposure on health outcomes in urban African settings and develop a geospatial Early Warning System for urban heat-health risks.

Methods: The study will systematically collect and analyze data from various sources, including longitudinal health studies, satellite imagery, and socio-economic surveys. Machine learning models will be used to identify patterns and predict heat-related health risks.

ANNEXURE C: HE²AT CENTER CONSORTIUM MEMBERS

- Wits Health Consortium (Pty) Ltd, South Africa*
- University of Cape Town, South Africa*
- International Business Machines (IBM) Corporation through its Thomas J. Watson Research Center, USA*
- University of Peleforo Gon Coulibaly, Côte d'Ivoire*
- Centre for Sexual Health and HIV AIDS Research (CeSHHAR), Zimbabwe*
- University of Michigan, United States
- University of Washington, United States

*Only these HE²AT Center Consortium Members shall have access to the Consortium-Shared Data for the RP2 Study analysis purposes.

ANNEXURE D: AUTHORSHIP GUIDELINES

Study Principal Investigators, Site Principal Investigators, and additional contributing study members will be invited to join the authorship group for any publications that use data from their study.

The authorship guidelines adhere to the ICMJE criteria for authorship, which include:

- Substantial contributions to the conception or design of the work or the acquisition, analysis, or interpretation of data for the work; AND
- Drafting the work or revising it critically for important intellectual content; AND
- Final approval of the version to be published; AND
- Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.