

## Terms of Reference

<b>Team:</b>	Information Systems and Data Management
<b>Unit:</b>	Information Systems and Analytics (ISA)
<b>Department:</b>	Health Emergency Information and Risk Assessment (HIM)
<b>Start Date:</b>	As soon as possible
<b>Duration:</b>	11 months. Up to 11 additional months subject to funding and performance.

Contact persons:

- Johannes Schnitzler: [schnitzlerj@who.int](mailto:schnitzlerj@who.int)
- Philip AbdelMalik: [abdelmalikp@who.int](mailto:abdelmalikp@who.int)
- Ayumi Kodama: [kodamaa@who.int](mailto:kodamaa@who.int)

### 1. Purpose

The *Information Systems and Data Management* team is seeking to improve the categorisation of content for the early detection and verification of potential health threats and risks in the context of the Epidemic Intelligence from Open Sources (EIOS) Initiative to improve the system and support expansion to and adoption across WHO, Member States and other organisations, especially in the context of the current COVID-19 situation.

### 2. Background

The WHO Health Emergencies Programme (WHE) is mandated to enhance WHO's capacity for the rapid detection, assessment and follow up of all public health threats and risks. This provides the opportunity to establish a framework that facilitates the implementation of a common approach to public health intelligence and event management across all levels of the organization.

The EIOS initiative is a network of organizations with one common goal: to minimise the impact of emerging threats and risks to human health through quality and timely intelligence at the member state, regional and global levels. In doing so, it helps strengthen capacity for early detection and evidence-based decision making, aligning with IHR event-based surveillance capacity requirements. The EIOS Initiative is being led by the *Information Systems and Data Management* team at headquarters, in collaboration with various stakeholders.

The EIOS system uses a broad range of publicly available information which is categorised based on pre-defined keyword combinations and exclusions. These category definitions directly affect the quality of the system, impacting the level of noise, the content seen by system users, how content is identified and the ability of users to build relevant and specific filters for the content most relevant to them. Categories need to be reviewed, rethought and updated to help create a systematic and reliable way to identify and classify content. Priority categories identified by Member States also need to be reviewed, enhanced and, where required, added and/or translated to ensure that the EIOS system is correctly capturing and categorising relevant content. These ongoing and evolving changes, enhancements and additions must be continually addressed to ensure relevance to and acceptance and adoption by Member States and other organisations.

Much work has been done on COVID-19 related categories since early 2020, however given the ongoing evolution of the situation (e.g. vaccination campaigns, changing public health measures and the emergence of new variants), this work must be maintained and continued. In addition, over half a dozen new Member States joined the EIOS initiative over the past year, with each requiring reviews, updates, and, in some cases, translations to category definitions in the system. Over a dozen additional Member States are planned for EIOS expansion in 2021-22, also necessitating the ongoing review and improvement of category definitions as other solutions to link categories through the use of graph data models are also being explored. The work to be carried out under this contract aims to improve the categorisation of content for the early detection and verification of potential health risks in the context of the EIOS Initiative and contribute to new methods and approaches to enhance the EIOS system and support requirements identified by stakeholders that have already adopted EIOS, as well as those identified for the current phase of EIOS expansion.

### 3. Deliverables

#### Output 1

Creation and enhancement of category definitions, especially as related to COVID-19, including public health and social measures, and as prioritised by WHO, EIOS Member States and other stakeholders.

#### Deliverables

- 1.1 Review of catalogued category definitions, ongoing identification and documentation of issues and priority ranking of categories to target for improvement, in collaboration with stakeholders (current EIOS communities and stakeholders targeted for expansion, including Member States)
- 1.2 Development of identified missing category definitions in collaboration with subject matter experts
- 1.3 Iterative modification, evaluation and improvement of prioritised category definitions (including removal and consolidation where appropriate).

#### Output 2

Creation of a new linked categories graph data model within the context of COVID-19 to explore augmentation and enhancement of current methodology

#### Deliverables

- 2.1 Contribute to the development of a graph data model for COVID-19 and other health threats as determined by the team
- 2.2 Document contributions, including methodology, findings, issues and recommendations for augmenting the current categorisation methodology with a graph data model

### 4. Technical Supervision

The consultant will work collaboratively with the *Information Systems and Data Management* team reporting to the medical officer/technical coordinator under the overarching supervision of the Team Lead.

### 5. Specific requirements

#### Qualifications:

- Advanced degree (Master's or higher) in epidemiology, public health, international health, or related field

#### Experience:

- **Required:** At least 7 years of experience in epidemiology and public health including at least 3 years of experience working with media monitoring systems for the early detection of public health risks and threats
- **Desirable:** Experience with the EIOS system and its functionality and a good understanding of open source information and main principles of public health intelligence are significant assets. Experience with graph data models and network analytics is also desirable.

#### Skills / Technical skills and knowledge:

- Demonstrated ability to interact in complex situations involving technical, cultural and political elements
- Sound analytical and organizational skills
- Demonstrated knowledge of surveillance issues and emerging diseases in international context.

#### Language requirements:

- **Required:** English Expert level (Read - Write – Speak)
- Intermediate knowledge of another UN language would be an asset.

## 6. Place of assignment

The work is expected to be carried out remotely. However the consultant is expected to liaise closely with the *Information Systems and Data Management* team in Geneva and other stakeholders, which will require the consultant to be reachable during normal business hours Geneva time.

## 7. Medical clearance

The selected Consultant will be expected to provide a medical certificate of fitness for work.

## 8. Travel

The consultant may be required to travel to meetings with stakeholders and collaborators.

*All **travel arrangements** will be made by WHO – WHO will not be responsible for tickets purchased by the Consultant without the express, prior authorization of WHO. While on mission under the terms of this consultancy, the Consultant will receive a **subsistence allowance**.*

*Visa requirements: it is the consultant's responsibility to fulfil **visa requirements** and ask for visa support letter(s) if needed.*

***Consultants working in Switzerland are subject to Swiss law and must abide by Swiss legislation, including social security and taxation legislation. It is the consultant's responsibility to review and abide by the conditions and obligations for consultants based in Switzerland.***

## 9. Application

Please submit your CV in Stellis format (<http://www.who.int/careers/en>), along with a cover letter and references to [kodamaa@who.int](mailto:kodamaa@who.int). If you have previously worked at WHO, please attach your evaluation form.