



European
Commission

**EARLY WARNING
FOR EPIDEMICS**

EIC • HORIZON
prize



SOLVE THE CHALLENGE

€5 million

Apply by 1 September 2020

RULES OF CONTEST

1. EARLY WARNING FOR EPIDEMICS

1.1 Objectives pursued

The objectives of the prize are:

- to develop and demonstrate a scalable, reliable and cost-effective early warning system prototype using Earth Observation data to forecast and monitor vector-borne diseases;
- to contribute to the prevention of outbreaks mitigating their impact on local, regional and global scales and providing support to existing elimination efforts.

The Earth Observation domain is changing with increasing amounts of data being generated from space-borne, air-borne, in-situ and citizens' observatories. Effective management of big data in this domain will be an essential element in improving the 'early warning' capabilities of any system which aims to mitigate epidemics related to vector-borne diseases.

The full potential of combining all available data has not yet been harnessed. Innovative solutions are needed to enable the system's wider use and exploitation in this context, help improve the 'preparedness' and response related to vector-borne disease outbreaks, and also foster the creation of a digital solution marketplace in the domain of environmental and climate health risks.

1.2 Expected Results

A reliable, cost-effective and scalable early warning system prototype to forecast and monitor vector-borne diseases. This system should encompass innovative technological solutions integrating big data derived from different sources, e.g. space-borne, airborne, in-situ and citizens' observations, climate and meteorological data, and modelling and other geo-located information related to vector-borne disease outbreaks and behaviour. The use of public health data and relevant socio-economic data will need to be taken into consideration for the development and demonstration of the early warning system prototype.

Demonstration of the prototype at local level, taking into account any relevant societal factors in the chosen geographical area. It should be compatible for use with data coming from existing multi-disciplinary networks comprising health, humanitarian aid and emergency management actors. The prototype should contribute to leveraging data and information from these networks as well as showcasing the operational potential and added value of the solution. Scalability and sustainability considerations should be included.

2. PRIZE AMOUNT:

The European Commission shall award a prize of 5 Million Euros¹.

3. DEADLINES & ADMISSIBILITY

Deadlines	
Opening of the submission:	26 April 2018
Deadline for registration of interest:	31 May 2020
Closing date for submission:	1 September 2020 at 23:59:59 CET²

Joint applications by a group of participants can be submitted. However, participants must appoint a 'lead participant' to represent them to interface with the Commission. The participants will be jointly responsible and must all fulfil and respect the conditions set out in these Rules of Contest.

Applications must be submitted by the (lead) participant via the Participant Portal Submission Service.

Applications must be readable, accessible and printable. Incomplete applications may be considered inadmissible if essential elements are missing (see General Annex B to the Main Work Programme).

The page-limit for your prize application (Part B) is: 60 pages.

Participants are invited to declare their intention to participate by registering their interest via the following functional mailbox: EC-EPIDEMICS-EIC-PRIZE@EC.EUROPA.EU by the above-mentioned deadline.

Sample application forms will be available on the Participant Portal Reference documents page.

¹ In accordance with the budgetary procedure set in the Financial Regulation No 966/2012, the award of a prize must be preceded by the adoption of the respective budget and the adoption of the financing decision. Since the prize amounts are only to be foreseen in the 2020 budget, they are subject to the availability of the appropriations provided for in the draft budget for 2020 after the adoption of the budget by the budgetary authority or, if the budget is not adopted, as provided for in the system of provisional twelfths.

² Central European Time = Brussels local time.

4. ELIGIBILITY

4.1 Eligibility criteria

The contest is open to all legal entities (i.e. natural or legal persons, including international organisations) or groups of legal entities.

Please note however that special rules may apply for entities from certain countries (see General Annex C to the Main Work Programme).

Please also be aware that participants that have already received an EU or Euratom prize cannot receive a second prize for the same activities.

4.2 Exclusion Criteria

Participants will be excluded if they (or one of them):

- are subject to an administrative sanction (i.e. exclusion)³
- are in one of the following situations⁴:
 - bankrupt, being wound up, having their affairs administered by the courts, entered into an arrangement with creditors, suspended business activities or subject to any other similar proceedings or procedures under national law (including persons with unlimited liability for the participant's debts)
 - declared in breach of social security or tax obligations by a final judgment or decision (including persons with unlimited liability for the participant's debts)
 - found guilty of grave professional misconduct⁵ by a final judgment or decision (including persons having powers of representation, decision-making or control)
 - convicted of fraud, corruption, involvement in a criminal organisation, money laundering, terrorism-related crimes (including terrorism financing), child labour or human trafficking (including persons having powers of representation, decision-making or control)
 - shown significant deficiencies in complying with main obligations under a procurement contract, grant agreement or grant decision financed by the EU or Euratom budget (including persons having powers of representation, decision-making or control)
 - found guilty of irregularities within the meaning of Article 1(2) of Regulation No 2988/95 (including persons having powers of representation, decision-making or control)
 - have misrepresented information required for participating in the contest or fail to submit such information
 - were involved in the preparation of the prize documents and this entails a distortion of competition.

³ See Articles 131(4) and 106(1) Financial Regulation.

⁴ See Articles 138(2) and 106(1), 107 of the Regulation (EU, Euratom) No 966/2012 of the European Parliament and of the Council of 25 October 2012 on the financial rules applicable to the general budget of the Union and repealing Council Regulation (EC, Euratom) No 1605/2002 (OJ L 218, 26.10.2012, p.1).

⁵ Professional misconduct includes: violation of ethical standards of the profession, wrongful conduct with impact on professional credibility, false declarations/misrepresentation of information, participation in a cartel or other agreement distorting competition, violation of IPR, attempting to influence decision-making processes or obtain confidential information from public authorities to gain an advantage.

5. AWARD CRITERIA

The prize will be awarded to the entry that best addresses the following cumulative criteria:

- Criterion 1: Operational capability and integration of existing data (Max. 40pts)
- Criterion 2: Demonstrated implementation within an affected community (Max. 40 pts)
- Criterion 3: Scalability and sustainability of the Early Warning Concept (Max. 20 pts)
- Criterion 4: Focus on demonstration of European technology (Max. 20 points)

5.1 Award Criteria Description

A detailed description of each of the four award criteria can be seen below.

Criterion 1: Operational capability and integration of existing data (max 40 pts)

The solution should integrate a wide range of data into an early warning system tailored for the needs of the affected community. It should be innovative and may be based on existing technologies. The solution should make use of effective big data management methods derived from a wide range of existing Earth observation data sources (space-borne, airborne, in-situ and citizens' observatories). Other types of geo-located data should be used including vector borne disease outbreak data and socio-economic data. The solution must not violate or infringe on any applicable regulation, law or third party rights and issues relating to data privacy and ethics must be taken into account.

Sub-Criterion 1.1 Description of community needs and overview of the early warning concept

- (a) Describe the problem and identify community needs
- (b) Select targeted geographic areas with justification
- (c) State the Early Warning System objectives
- (d) Provide an overview of the concept and justification of methodology

Sub-Criterion 1.2. Technical concept description and operational capability

- a) The technical concept should be described in detail including all elements of the system including data integration, auxiliary data, algorithms, models, data flow, data management and interfaces/interactions.
- b) The solution should utilise multiple data sets and models and harness the use of appropriate data integration methodologies and techniques e.g. Earth observation data (spaceborne, airborne, in-situ, and citizens' data), climate and meteorological information and models, socio economic data, health system data.
- c) The innovative solution is expected to correspond to a Technology Readiness Level (TRL) greater or equal to 7.
- d) The capability of the solution should be demonstrated in terms of reliability, availability, ease of maintenance, ease of use and operational safety.

Sub-Criterion 1.3. Use of free and open data and contribution to EuroGEOSS

- a) The solution should use free and open data provided through various programmes such as Copernicus and the Global Earth Observation System of Systems (GEOSS).
- b) The solution should contribute to the EuroGEOSS umbrella framework:
(<http://ec.europa.eu/research/eurogeoss>)

Criterion 2: Demonstrated Implementation within an affected community (max 40 pts)

The solution should be demonstrated in a technological, administrative and social context within at least one affected community for a **minimum of 6 months “prototype field trial” report**. It should demonstrate a clear and positive impact and added value (in terms of efficiency and reliability) with respect to existing programmes. The inclusion of more demonstration areas and/or longer demonstration times will be seen as a positive aspect.

Sub-Criterion 2.1 Demonstrated impacts, proven use of results and prototype field trial report

- a) Demonstrated impacts, proven use of results, and prototype field trial report(s) are requested to document the extent to which the early warning system helps to prevent disease outbreaks and infections.
- b) Value adding metrics, such as the number of people reached and demonstrated reduction of new infections in the demonstration area should be included.
- c) At least one event should have been organised to showcase the results/impact of the prototype system to members of the vector-borne diseases and epidemics communities.
- d) The relevance of the targeted environment and the choice of demonstration area(s) should be described.
- e) Technological, administrative and social aspects should be analysed. A description of the measures required to use the results in an operational context should be included.

Sub-Criterion 2.2 Level of cooperation with existing control programmes in the demonstration areas

- a) Evidence of appropriate cooperation with existing control programmes in demonstration areas should be presented
- b) Established links with local/national health systems is seen as a critical aspect.

Sub-Criterion 2.3 Level of communication, promotion and involvement at local level

Evidence of effective communication, promotion and local involvement in the demonstration exercise should be presented (this may include citizens' science activities).

Criterion 3: Scalability and sustainability of the Early Warning Concept (max 20 pts)

While the system must be demonstrated in a selected area, the solution needs to have clear potential for replicability/scalability both at technological and at societal levels.

Sub-Criterion 3.1 Scalability of the early warning concept

- a) Extent to which the solution has a clear potential for replicability/scalability both at technological and at societal levels.
- b) Estimation of the cost implications for the prototype system regarding replicability/scalability considerations.

Sub-Criterion 3.2 Sustainability of the early warning concept

- a) A comprehensive plan for the system's long term establishment and funding is required to assess and ensure sustainability.
- b) Local capacity building is seen as a critical aspect for the sustainability of the solution. At least two sites should be selected for further development.
- c) Resource planning should be presented to showcase the sustainability of the system over an agreed timeframe.
- d) Credible funding opportunities from various sources should be identified, taking into consideration all credible potential sources of funding e.g. private venture, commercial backers, crowd sourcing.

Criterion 4: Focus on demonstration of European technology (max 20 pts)

The European technology used within the proposed early warning system should be identified, described and demonstrated to an appropriate level in line with criterion 1. There should be a focus on European technology demonstration and the contribution of this technology to the overall early warning system. The interfaces between European and non-European elements should be identified and described.

6. DOCUMENTS

The mandatory supporting documents are set out in the application form.

Participants may be asked at a later stage for further documents (for legal entity validation, bank account validation, ethics review, declaration of honour on exclusion grounds, etc.).

7. PROCEDURE

If there are more than 10 applications, there will be a pre-selection phase to select the best 5 applications to pass to jury review. Otherwise, all applications will pass directly to jury review.

The pre-selection panel and jury usually have a different composition, but jury members may participate in the pre-selection panel.

The jury evaluation is planned to take place between September 2020 and November 2020.

The pre-selection panel/jury will evaluate each application against the four award criteria and score them as follows (half marks are possible):

Criterion	Threshold	Maximum points
1. Operational capability and integration of existing data	10	40
i. Description of community needs	5	15
ii. Technical concept description and operational capability	5	15
iii. Use of free and open data and a contribution to EuroGEOSS	0	10
2. Demonstrated Implementation within an affected community	20	40
i. Demonstrated Impact, proven use of results and prototype field trial report	10	20
ii. Level of cooperation with existing control programmes in the demonstration area	5	10
iii. Level of communication, promotion and involvement with local area	5	10
3. Scalability and sustainability of the Early Warning Concept	10	20
i. Scalability of the system	5	10
ii. Sustainability of the system	5	10
4. Focus on European technology demonstration	10	20
Total	50	120

For applications with the same score, the pre-selection panel/jury shall determine a priority order according to the following approach: The score for the criteria 1 and 2 will be given a weight of 2 and the score for criteria 3 and 4 shall be given a weight of 1.5. If two or more applications tie for the first rank, the prize will be equally divided and awarded to all.

The 3 best applications shall be invited to Brussels as finalists in December 2020 to demonstrate their solution and for a hearing with the jury. On the basis of the evaluation report, the Commission will decide on the award of the prize. All participants shall be informed of the outcome of their application before the end of February 2021.

8. OTHER CONDITIONS

8.1 Payment arrangements

The prize money EUR 5 Million will be paid to the (lead) participant in one instalment after the award ceremony by bank transfer, provided all the requested documents have been submitted.

8.2 Publicity — Promoting the prize — Visibility of EU funding

8.2.1 Publicity by the winner(s)

The finalist(s) and the Winner must promote the prize and its results, by providing targeted information to multiple audiences (including the media and the public) in a strategic and effective manner.

Unless the Commission requests or agrees otherwise or unless it is impossible, any communication activity related to the action (including in electronic form, via social media, etc.) must:

- (a) display the EU emblem and
- (b) include the following text:

“This action/activity/person was [finalist for/]winner of the Early Warning for Epidemics from the European Union’s Horizon 2020 research and innovation programme”.

When displayed together with another logo, the EU emblem must have appropriate prominence.

For the purposes of their obligations relating to this prize, the finalists and winners may use the EU emblem without first obtaining approval from the European Commission. This does not, however, give it the right to exclusive use.

Moreover, they may not appropriate the EU emblem or any similar trademark or logo, either by registration or by any other means.

8.2.2 Publicity by the Commission

The Commission may use, for its communication and publicising activities, information relating to the action, documents notably summaries for publication as well as any other material, such as pictures or audio-visual material that it receives from the participants (including in electronic format).

The Commission shall publish the name of the finalists and the winner(s), their origin, the amount of the prize and its nature and purpose — unless they have requested to waive this publication (because disclosure risks threatening its security and safety or harm its commercial interest).

Photos and videos taken by the Commission either in preparation of the award ceremony or during the award ceremony are the sole property of the Commission.

8.3 Dissemination and exploitation of results

The winner(s) must comply with the obligations set out in Title III of the Horizon 2020 Rules for Participation Regulation No 1290/20136.

For more information and best practice, see Articles 23a-31 of the H2020 AGA — Annotated grant agreement.

8.4 Processing of personal data

8.4.1 Processing of personal data by the Commission

Any personal data will be processed by the Commission under Regulation No 45/20017 and in accordance with the Participant Portal privacy notice(s).

All winner(s) consent that the Commission can publish (in whatever form and medium). The following information:

- Name
- Member State of origin (address or NUTS 2 region)
- their activities in relation to the award of the prize (via the summary for publication they provided)
- prize amount

8.4.2. Processing of personal data by the participants

The participants must process personal data in compliance with applicable EU and national law on data protection (including authorisations or notification requirements, if any).

8.5 Ethics

The activities must be carried out in compliance with:

- (a) ethical principles (including the highest standards of research integrity) and
- (b) applicable international, EU and national law.

No prize will be awarded for activities carried out outside the EU, if they are prohibited in all Member States. The participants must ensure that the activities have an exclusive focus on civil applications.

⁶ Regulation (EU) No 1290/2013 of the European Parliament and of the Council of 11 December 2013 laying down the rules for participation and dissemination in “Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020)” (OJ L 347, 20.12.2013 p.81).

⁷ Regulation (EC) No 45/2001 of the European Parliament and of the Council of 18 December 2000 on the protection of individuals with regard to the processing of personal data by the Community institutions and bodies and on the free movement of such data (OJ L 8, 12.01.2001, p. 1).

The participants must ensure that the activities do not:

- (a) aim at human cloning for reproductive purposes
- (b) intend to modify the genetic heritage of human beings which could make such changes heritable (with the exception of research relating to cancer treatment of the gonads) or
- (c) intend to create human embryos solely for the purpose of research or for the purpose of stem cell procurement, including by means of somatic cell nuclear transfer.

Research activities involving human embryonic stem cells (hESC) are moreover subject to the conditions set out in the Statement of the Commission related to research activities involving human embryonic stem cells.

The participants must respect the highest standards of research integrity — as set out, for instance, in the European Code of Conduct for Research Integrity⁸.

For more information and best practice, see the Participant Portal Online Manual, the Guidance — How to complete your ethics self-assessment and the Guidance note — Research focusing exclusively on civil applications.

8.6 Security

The activities must be carried out in compliance with Commission Decision 2015/444, i.e. security-sensitive information must be EU-classified, if its unauthorised disclosure could adversely impact the interests of the EU or of one (or more) of its Member States. Applications that are too security-sensitive cannot be awarded a prize.

For more information and best practice, see the Guidance — Guidelines for the classification of information in research projects, the Guidance — Guidelines for the handling of classified information in EU research projects, the Guidance note — Potential misuse of research results and the Guidance note — Research involving dual use items.

8.7 Conflict of interests

The participants must take all measures to prevent any situation where the impartial and objective award of the prize is compromised for reasons involving economic interest, political or national affinity, family or emotional ties or any other shared interest ('conflict of interests').

They must inform the Commission without delay of any situation constituting or likely to lead to a conflict of interests and immediately take all the necessary steps to rectify this situation.

The Commission may verify that the measures taken are appropriate and may require additional measures to be taken by a specified deadline.

8.8 Liability for damages

The Commission cannot be held liable for any damage caused to the participants or to third parties as a consequence of the prize, including for gross negligence.

⁸ European Code of Conduct for Research Integrity of ALLEA (All European Academies) and ESF (European Science Foundation) of March 2017 http://ec.europa.eu/research/participants/data/ref/h2020/other/hi/h2020-ethics_code-of-conduct_en.pdf.

The Commission cannot be held liable for any damage caused by any of the participants in the context of the prize.

8.9 Checks, audits and investigations

The Commission, the European Anti-Fraud Office (OLAF) and the European Court of Auditors may carry out checks, audits and investigations in relation to the prize.

8.10 Withdrawal of the prize — Recovery of undue amounts

The Commission may withdraw the prize after its award and recover all payments made, if it finds out that:

- (a) false information, fraud or corruption was used to obtain it
- (b) a winner was not eligible or should have been excluded
- (c) a winner is in serious breach of its obligations under these Rules of Contest.

8.11 Administrative sanctions

If a participant has committed irregularities or fraud or has made false declarations, the Commission may also:

- (a) exclude the participant from all future contracts, grants and contests financed from the EU or Euratom budget for a maximum of five years (or 10 years in case of repetition) and/or
- (b) impose a financial penalty between 2% and 10% of the value of the prize (or between 4% and 20% in case of repetition).

8.12 Cancellation of the contest

The Commission may cancel the contest or decide not to award the prize — without any obligation to compensate participants —, if:

- (a) no applications are received
- (b) the jury does not find a winner
- (c) the winner is not eligible or must be excluded or
- (d) the objective of the contest has already been achieved.

8.13 Complaints

Complaints against decisions negatively affecting the rights of a participant or winner can be brought before the General Court — or, on appeal, the Court of Justice of the European Union — under Article 263 of the Treaty on the Functioning of the EU (TFEU).

9. CONTACT

For more information, please see the https://ec.europa.eu/research/eic/prizes_epidemics.

In case of questions, please send your request to the functional mailbox: EC-EPIDEMICS-EIC-PRIZE@EC.EUROPA.EU