



ASCAPE Open call sub-call 2 description

Sub call 2 name: Contribute new algorithms to improve or/and train ASCAPE Open AI infrastructure to address various types of cancer or medical conditions

Expected ASCAPE contribution: €40.000, access to ASCAPE Open AI framework, synthetic data samples, technical guidance and support, communication services.

Admissibility conditions: Proposals must be submitted through the ASCAPE page at fundingbox.com. Specific requirements are provided there.

Eligibility conditions:

- Only countries and legal entities indicated as eligible in Guide for Applicants can be funded. In any other case your proposal will be excluded.
- Data used must be anonymized.

Deadline: December 10, 17.00 CET.

Scope: It is widely accepted that technological advances in Big Data, artificial intelligence (AI) and machine learning can help in addressing cancer in general and as a sub-objective to improve the quality of life of patients. ASCAPE project taking advantage of these developments creates an open AI infrastructure for health stakeholders such as hospitals. New knowledge produced by this process will be sent back to the open AI infrastructure to be shared among everyone while the medical data will remain private. The services to be designed and deployed by the project will include intelligent interventions for physiological and psychological support, improved patient and family counselling and guidance, early diagnosis and forecasts of ill health, identification of disease trajectories and relapse, as well as improved health literacy.

In the context of sub-call 2, ASCAPE seeks applications from external AI / ML stakeholders, research teams and SMEs with expertise on cancer related medical applications, AI / ML models and datasets. The applicants shall aim to develop and/or evaluate their AI/ML models on cancer-related datasets and compare them to the AI/ML models or explanation mechanisms developed by the consortium. Alternatively, they may add additional functionalities, tools or datasets complementing the cancer-related tools and datasets of the consortium and demonstrate



improved AI/ML-based predictions, simulations, or explanations. Finally, they may use and extend the datasets or the ASCAPE infrastructure to other types of cancer or integrate their own additional functionalities.

The basis for this work will be synthetic datasets in a FHIR HL7 compatible format provided by the ASCAPE consortium and that have comparable statistical properties than the real datasets collected in ASCAPE. Furthermore, the open-source ASCAPE components (e.g., patient data enrichment, training data curation, federated model training, predictions, simulations, and explanations) will be available to include additional functionalities and AI/ML models and tailor them to other cancer-types or integrate own datasets and solutions.

Solutions proposed to be applied on synthetic datasets or to enhance the ASCAPE AI platform with new AI / ML-based functionalities should be between TRL4-TRL9, and address challenges related to the cancer patient quality of life. Demonstrable improvements in AI/ML model accuracy, efficacy, explainability or simulations may be submitted to the consortium to be reviewed and evaluated to be included in the core ASCAPE framework. The following examples are non-exhaustive categories of quality-of-life-related technology domain, but other solutions/methods with direct positive impact in the broader patient quality of life will be considered.

Possible technology domain on which applicants should select from are the following:

- AI/ML-model training algorithms for quality-of-life issues and interventions
- AI/ML model-based quality-of-life-related prediction
- AI/ML model-based quality-of-life-related analytics
- AI/ML model-based quality-of-life-related simulations
- Dataset extensions to enable or improve AI/ML algorithms
- AI/ML medical solution that provide novel possibilities to exploit ASCAPE's datasets for the benefit of the patients.

Expected outcomes:

Applicants are requested to select only one technology domain in which their proposal fits. If more than one technology domain applies, select the domain that most closely describes the intended use of the solution. Other technology domains may be chosen but should be agreed on with the consortium before proposal submission. If a proposed technology domain is not considered aligned with the concept of the proposal, the application will be deemed as non-eligible.

To be eligible for ASCAPE Open Call applicants and their proposed solutions must:

- Tackle a patient need within the healthcare domain.
- Offer a solution that uses ASCAPE synthetic datasets and/or open-source components to address challenges in the healthcare sector.



- Demonstrate how the proposed solution improves the ASCAPE solution or your own services to support patients and their quality of life.
- Demonstrate a plan and an approach for testing, prototyping, and demonstrating the solutions/algorithms/methods in cooperation with ASCAPE partners and possible integration in the ASCAPE framework.
- Agree to actively support the project's dissemination activities.
- Establish contact with ASCAPE partners to ensure collaboration and transfer of information and knowledge.