Medical technologies, Digital tools and Artificial Intelligence (AI) analytics to improve surveillance and care at high Technology Readiness Levels (TRL)

Innovation Actions of one of the following two categories to:

1) Support solutions that are close-to-market (TRL 7) in one of the COVID-19 areas mentioned below and that have already received, or are about to receive, the CE marking to proceed to large scale testing, piloting and deployment operations in critical healthcare areas (or wherever else is relevant) (type 1);

2) Support market innovation (from lab-to-fab) for further developing and maturing innovative solutions that have already been validated in lab environments (TRL 6-7 or higher) with the aim to help accelerate developments and achieve conformity assessment (CE marking) (type 2).

This topic addresses consortia consisting of innovative technology providers, including SMEs, and/or organisations that can offer the range of activities required to address the objectives of the topic; the latter could for example be based on Digital Innovation Hubs, digital health accelerators and knowledge hubs, Centres offering Pilot Lines or similar technology, business and/or knowledge transfer organisations. The innovative technology providers can be either members of the applicant consortia or selected through open calls organised by the consortium using financial support to third parties. The support offered could include access to product development, accelerator, incubator and technical services and capabilities such as testing and experimentation facilities together with expertise, prototyping, design, engineering or pilot manufacturing services as necessary, as well as providing support for medical certification and clinical validation. Any use of third party grants must result in minimal administrative burden for participants, and allow the fastest possible launch of the projects.

The proposed actions could encompass a combination of tools and technologies, such as: microelectronics, micro/nano/cyber-physical systems; bio-functionalized chips and biosensor arrays; bio-photonics; graphene or related materials (GRM); data, AI and robotics; pathogen detection technologies; e-health, telemedicine and digital solutions.

The proposals should address one or more of the following areas:

- fast, cost-effective and easily deployable sampling, screening, diagnostic and prognostic systems, including new methods for screening of lungs, using for example AI or advanced photonics solutions, to detect the presence of the pathogen related parameters especially in an early stage of infection;
- environmental surveillance (sewage, air, etc.) systems and data analytics as a sentinel for viral (re)emergence and spread in communities, based for example on optical biosensors or genetic detection;
- low cost sensors, smart wearable devices and robotics/AI for telemedicine, telepresence and continuous remote monitoring of patient parameters;
- protection of healthcare practitioners and the general public improving for example the wetting and filtering properties of fabrics used for face masks; sensors, sterilisation, including robotics and AI solutions, for disinfection and social distancing in environments such as healthcare, public spaces and buildings;
- innovative data-driven services and tools combining data assets from various relevant privately held and/or publicly available sources. These could include AI-based solutions exploiting such data and possibly additional sensor-based signals, for diagnostics, prevention, treatment, or rehabilitation. Where appropriate, privacy, data protection and anonymity in the use of mobile warning and prevention applications, as referred to in the Commission Recommendation C(2020) 2296 of 8 April 2020 on a common Union toolbox for the use of technology and data to combat and exit from the COVID-19 crisis, should be ensured.

Expected EU contribution per proposal

The Commission considers that proposals requesting a contribution from the EU of between EUR 2 and 5 million would allow these specific challenges to be addressed appropriately. For proposals with financial support to third parties, up to EUR 10 million may be requested. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

The proposers must specify which type of category 1) or 2) above they are addressing; at least one proposal will be selected in each category.

For grants awarded under this topic, beneficiaries may provide financial support to third parties as described in part K of the General Annexes of the Work Programme, typically in the order of EUR 20.000 to 100.000 per third party. This is to ensure that the innovators selected though open calls have appropriate resources for addressing the scope and reaching the specific objectives of this topic. The support to third

parties may only be provided in the form of grants. The respective options of Article 15.1 and Article 15.3 of the Model Grant Agreement will be applied.

The maximum duration is 2 years.

Applicant consortia planning to launch competitive calls should be ready to do so within a month after the start of the project and proceed to fast-track proposal selection and launch of the selected projects. To this end, they should explicitly provide evidence in the proposal as to how they will reach a very large number of potentially interested organisations and demonstrate convincingly that they can handle actions of this kind and scale (e.g. through a proven track record).

- To contribute to the public health preparedness and response in the context of the ongoing epidemic of COVID-19 and to ensure the availability of critical technologies and tools.
- To contribute to the acceptability, adoption, appropriateness, feasibility, fidelity, implementation cost, coverage, and sustainability of diagnosis and clinical management of patients and survivors of COVID-19.
- To contribute to proposing recommendations for changes that would allow a fast recovery and a better preparedness, including in the health care systems, for future health emergencies.
- To accelerate the deployment and market uptake of mature health technologies for the prevention and optimised treatment of the COVID-19 disease, by delivering results within 3-24 months to end-users at scale.

Letzte Aktualisierung: 1 November 2023

Permalink: https://cordis.europa.eu/programme/id/H2020_SC1-PHE-CORONAVIRUS-2020-2B/de