

**COMMISSION ON SCIENCE AND TECHNOLOGY FOR DEVELOPMENT
(CSTD)**

Geneva, Switzerland

Contribution by

Portugal

to the CSTD call for information sharing on initiatives against COVID-19

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As requested, please find attached a document prepared by the Portuguese Ministry of Science, Technology and Higher Education containing a summary of the initiatives and measures that were taken in the fight against Covid-19 in Portugal.

It should be noted that, in addition to the measures taken by the Portuguese Science and Technology Foundation (FCT) and by the National Innovation Agency (ANI), companies and citizens made very important, and often gracious, contributions.

Please find below some examples of companies from other branches of activity that have started to produce biosafety equipment or support for tests:

- **Hidrofer**, a manufacturer of swabs, can produce 12,000 swabs per hour, which corresponds to the daily consumption in Portugal;
- **Logoplaste** produces tubes to transport swabs;
- **OLI**, a toilet flush manufacturer, produces protective visors;
- **Science4You** produces 15,000 goggles a day.

There are many other examples. Several companies in the mold sector produce visors, while textile companies have developed tunics and other protective equipment. Perhaps one of the most versatile initiatives, albeit with low volume production, is the one resulting from 3D printers, which are already present in many regions, including the Portuguese Speaking African Countries (PALOP). Sharing drawings, by email, then allows local printing.

Several clinical laboratories have started to test, while universities and polytechnics are working on the development of equipment, including the most complex ones, such as ventilators. Many of these units are supporting their counterparts in other countries and transferring knowledge that allows them to produce locally.

We believe that many of these experiences can be repeated in other contexts and help to reduce the public health and economic impacts caused by the pandemic.

Portuguese Mission in Geneva

Research and innovation for preventing Corona virus in Europe

Portuguese actions and positions for potential enlarged EU joint ventures

Task force organized by the Ministry of Science, Technology and Higher Education, through the *Portuguese Science and Technology Foundation, FCT, the National Agency for Clinical Research and Biomedical Innovation, AICIB, and the National Innovation Agency, ANI*

22march 2020

1. Equipment and Devices: Short term (March-April-May)

1.1 Testing kits (PCR and other methodologies)

Requires enlarging supply of materials and reagents at an European level.

Sample Portuguese initiatives:

- Fast screening kit and system developed by the firm Biosurfit (<https://www.biosurfit.com/en/>): tests in a Hospital in Lisbon;
- Protocol developed by the Associated Laboratory IIMM - Institute of Molecular Medicine (<https://imm.medicina.ulisboa.pt/>): tests in a hospital Lisbon;
- others emerging in Oporto.

1.2. Fast development of ventilators for emergency rooms

Requires specific valves and other components, available only in a few companies, as well as the adoption of protocols for safe operation. There is the need of coordination of several task forces in Europe beyond actions under the Open AIR project.

Sample Portuguese initiatives:

- Initiatives in several engineering and research centers (including at CEiiA, <https://www.ceiia.com/>; INEGI, www.inegi.pt, INESC TEC, <https://www.ceiia.com/>), as well as in several academic institutions.

1.3. Other innovative equipment, systems, solutions and devices

Promoting European joint tasks for innovative products and systems able to generate low cost solutions to prevent the contamination of the virus and COVIDIS.

Sample Portuguese initiatives:

- AirPort control machines equipped with facial temperature measurement, as an add option to current passport machines (by the firm by VISION Box).
- others being collected by AICIB – *National Agency for Clinical Research and Biomedical Innovation*, in articulation with the *National Innovation Agency, ANI*, and the *Portuguese Science and Technology Foundation, FCT*.

2. Data systems and policy: Short term (March-April)

COVID-19 information systems for population, with open data policy integrated with data analysis to provide orientations towards advising population at large for prevention measures, as well as to prevent false alarms. This initiative requires access to health data and information of tests of population at large (including those with negative results) as well as the mobilization of data scientists. But it must be done carefully to avoid hidden and political agendas, as well as false alarms.

This will gain from an enlarged European task force, for articulation of methodologies and, above all, validation/certification of analysis and the communication of results for population at large.

Sample Portuguese initiatives:

- Tentative task for by the *Portuguese Science Foundation, FCT*, in cooperation with health authorities and under the overall coordination of the *Public Health Scholl of the University of Porto*, under the *National Digital Skills Initiative, INCoDe.2030*.

3. New solutions/interventions: Medium term (April – June)

Coordination of national task forces to foster user-driven innovation and new science-based solutions, which will gain from an enlarged European task force.

In particular, **EC could launch an ERA-NET R&I of about 300 million Euros** (COVID-19 R&I to protect EU) with the participation of all national funding agencies, to be launched before the 3rd of April.

Sample Portuguese initiatives:

- **“Science 4 COVID19”**: open and inclusive call for ideas and the organization of task forces to collect and mobilize ideas from science and innovation players, with a website under preparation by the *Portuguese Science Foundation, FCT* and the *Agency for Clinical Research and Biomedical Innovation, AICIB*, in close cooperation with public and private research institutions;
- **Competitive Seed funding “RESEARCH 4 COVID19”**: competitive call for research and innovation proposals under preparation by the *Portuguese Science Foundation, FCT* and the *Agency for Clinical Research and Biomedical Innovation, AICIB*.
- **Call for entrepreneurial ideas** by the *National Innovation Agency, ANI*, as in <https://www.ani.pt/pt/portugal-inovador/portugal-inovador/solu%C3%A7%C3%B5es-covid-19/>;
- Promotion and support to the Portuguese participation in the recent EC call of proposals for SMEs, by *AICIB – National Agency for Clinical Research and Biomedical Innovation* and the *National Innovation Agency, ANI*.

4. Vaccine/new therapies: Short/medium term

Need for a major European task force and cooperation to help developing a vaccine and other potential therapies.

Sample Portuguese initiatives:

- major biochemical firms are working with international consortia, with tests in China and elsewhere;
- others being collected by *AICIB – National Agency for Clinical Research and Biomedical Innovation*, in articulation with the *National Innovation Agency, ANI*, and the *Portuguese Science and Technology Foundation, FCT*.

5. Science and society - Social remediation and promotion of social and human actions to foster social resilience (Short/medium term)

The need of European coordination of task force on risk perception and the development of actions towards the promotion of scientific culture and social engagement towards resilient societies.

Sample Portuguese initiatives:

- Preparation and dissemination of science-based material for schools, by the National Agency for Science and Technology Culture, *Ciencia Viva*, <http://www.cienciaviva.pt/home/>;
- Engagement of science centers throughout the country in local actions, in coordination by the National Agency for Science and Technology Culture, *Ciencia Viva*, <http://www.cienciaviva.pt/home/>;
- Initiatives in several research and academic centers;

6. Distance education and telework (Short/medium term)

The need of European coordination of task force to foster the exchange of schemes, methodologies and practices.

Sample Portuguese initiatives:

- Major engagement by all higher education institutions, with a massive adoption of distance education schemes;
- Major task force of the digital infrastructure of the Division of Scientific computation of *Portuguese Science Foundation, FCT-FCCN*, in cooperation with the *National Digital Skills Initiative, INCoDe.2030*, making available a diversified set of facilities (*COLIBRI, EDUCAST, VIDEOCAST*);