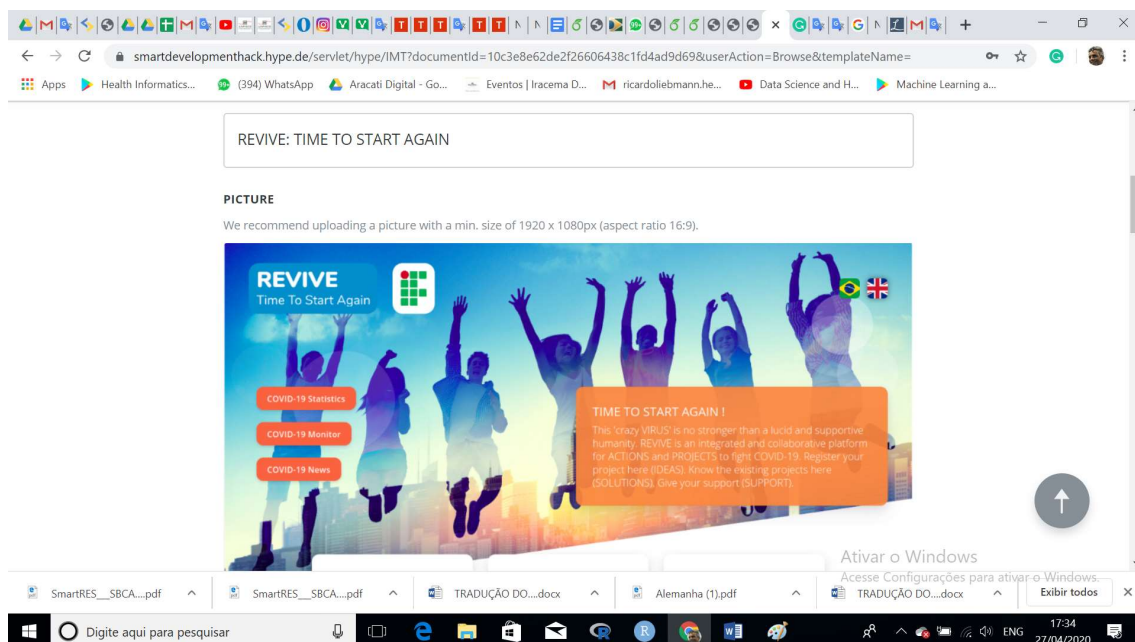


**Submission I-2020-03352: REVIVE - TIME TO START AGAIN !!!**

**ANTONIO MAURO DE OLIVEIRA**



**Which specific problem or need are you tackling with your solution?**

Due to the pandemic caused by COVID-19, which has recently surprised the world, many ideas, products and methodological processes have been brought forward by public and private sectors, underlying the pressing anxiety of many to find effective mechanisms in order to face this virus that threatens world peace.

However, most of the time these ideas, products and methodological processes belong to small government, academics, companies, and corporate ecosystems that do not know and / or do not communicate with one another.

This naturally hinders relationships and the construction of partnerships that could result in the sharing of these ideas, products and methodological processes, benefitting both

the proponents as well as those interested in their use. It also prevents the appearance of opportunities for companies or individuals who may have a philanthropic or commercial interest in providing financial or material support to these ideas, products and methodological processes.

In addition to the "feuds" that rage indoors, keeping to themselves these ideas, products and methodological processes, we also see proposals that appear in a disorderly manner in social networks and other mass communication mechanisms, leading to the aggravation of the above problem: the lack of analysis of relevance, and of a technical evaluation and / or scientific analysis of the quality of the proposed innovation and its cost / benefit aspects.

In short, the lack of a "digital meeting point" for the sharing of ideas, products and methodological processes has hindered strategies for the efficient fight against this "crazy virus" that has been affecting us all socially, financially and psychologically, making our lives static and unproductive this year of 2020.

#### **Short summary of the solution \***

REVIVE is an intelligent digital platform developed with the main objective of sharing ideas, products and methodological processes proposed by public entities, private companies and individuals to help combat COVID-19,.

The REVIVE platform presents itself as a "meeting place" for three types of actors in the context of combating COVID-19:

- 1) THE IDEA PRODUCER: this item records ideas, products and methodological processes existing anywhere in the world. THE IDEA PRODUCER hopes his proposal will be known for helping the world, philanthropically or creating business partnerships.
- 2) THE INTERESTED PARTY in the SOLUTION: this item allows everyone to search for ideas, products and methodological processes registered by an IDEA PRODUCER. The objective is to help the INTERESTED PARTY in the SOLUTION to consume the IDEA PRODUCER's proposal, and use it to combat COVID-19 in a philanthropic or commercial way.
- 3) THE SUPPORTER: this item facilitates anyone, entity public, private, or physical person to help the ideas, products and methodological processes registered by IDEA PRODUCER. This kind of help has non-commercial objectives. It can be financial, material or technological.

REVIVE offers intelligent search engines, based on machine learning and heuristics, as well as interfaces with chatbots that use PLN technology. The expectation is to encourage, once authorized by its users, the sharing of ideas, products and methodological processes

Associated with REVIVE, there is a pandemic monitoring system in real time that allows data to be viewed at different levels in COVID-19. Among the graphs presented, there are several ways to view the history of each state, highlighting the forecast graphs (linear, exponential, etc.) for the next days. Many of these graphs have visualizations in conjunction with several countries in order to use them as a reference for each analysis.

A COVID-19 progression simulator was added to this platform to analyze the natural progress of this epidemic if there is no intervention of measures of social distance, as well as simulation with intervention in a single population with measures of social distance (stay at home). This simulator also presents an analysis of the hospital capacity in view of the health system of this analyzed population, using parameters such as the severity of the disease and the growth rate of critical patients who need ICU care and mechanical ventilation.

Finally, the REVIVE platform also intends to develop activities that disseminate the results obtained, associated with campaigns to value human solidarity as a symbol of its main motivation, its main value.

**What's the readiness level of the proposed solution? \***

IF APPLICABLE: IN WHICH REGION IS YOUR SOLUTION ALREADY BEING USED IN?

- ☐ Asia
- ☐ Europe
- ☐ Sub-Sahara Africa
- ☐ Middle East and North Africa
- ☐ Latin America
- ☐ North America
- ☐ Australia

WHAT DOES IT NEED TO ADAPT AND SCALE YOUR SOLUTION?

IS THERE ANY LEGAL PROTECTION FOR THE SOLUTION? \*

**WHO DEVELOPED THE SOLUTION AND WHO OWNS IT? \***

The first version of the REVIVE platform and its associated application (COVID-19 MONITOR) were developed by professors, students and professional programmers of the master's course in computer science at the research laboratories of the Federal Institute of Ceará (IFCE), in Brazil, under the responsibility of researchers Dr. Mauro de Oliveira (Lab of Computer Networks and Systems) and Dr. Pedro Pedrosa (Image Processing Lab, Signs and Applied Computer), respectively.

The REVIVE platform is the result of a partnership with the Science, Technology and Innovation Foundation of Fortaleza (CITINOVA), chaired by Professor Dr. Claudio Ricardo Gomes de Lima. Both CITINOVA and IFCE are public bodies in Brazil, with non-commercial objectives in their research and development of social technologies, as is the case with the REVIVE platform.

REVIVE is not of a commercial nature, aiming simply to be another mechanism to help combat COVID-19, thus making its philanthropic contribution to world society.

According to the rules of IFCE, which implements the REVIVE platform, the intellectual property of any system developed in its laboratories belongs to the responsible teachers by the projects.

**AS A REPRESENTATIVE OF WHICH ORGANISATION OR TEAM ARE YOU PROVIDING THE SOLUTION? \***

In proposing the REVIVE solution - TIME to START AGAIN on the #SmartDevelopmentHack platform, I represent the Federal Institute of Ceará (IFCE), a public institution of professional and technological education in the State of Ceará (Brazil), linked to the Brazilian government.

The REVIVE platform is an initiative of the partnership between the IRACEMA Digital Institute, a private non-profit entity, chaired by Engineer Ricardo Montenegro Liebmann, and CITINOVA (Foundation for Science, Technology and Innovation in Fortaleza), chaired by Professor Claudio Ricardo Gomes de Lima, both based in Fortaleza, State of Ceará (Brazil).

CITINOVA and IRACEMA Digital are non-profit entities. Its research and development actions in social technologies, such as the REVIVE platform, aim to improve society.

IRACEMA Digital and CITINOVA, promoters of REVIVE, recognize the Federal Institute of Ceará (IFCE) as rights holders on the REVIVE platform.

**IF YOU ALREADY HAVE POTENTIAL PARTNERS IN MIND FOR IMPLEMENTING THE SOLUTION IN A LOCAL CONTEXT, PLEASE NAME THEM**

Potential Partner 01: The "Sistema Único de Saúde" (Unified Health System), better known by the acronym SUS, is the public health system in Brazil. The SUS is one of the largest and most complex public health systems in the world, ranging from simple care for blood pressure assessment, through Primary Care, to organ transplantation, ensuring comprehensive, universal access and free for the entire population of the country. With its creation, SUS provided universal access to the public health system, without discrimination.

Potential Partner 02: Secretariat of Health in Brazilian states: Brazil is a federation of States with administrative autonomy. Each state has a health Secretariat that develops its administrative policies and assistance, part of them are associated with SUS.

**FURTHER RESOURCES EXPLAINING THE SOLUTION:**

[Embed Video](#)

[Attachments](#)

**IF YOUR SOLUTION GETS CHOSEN BY AN IMPLEMENTING PARTNER: ARE YOU WILLING TO ALSO PARTICIPATE IN THE VIRTUAL HACKATHON? \***

Note: Only if your solution gets selected by an implementation partner, you get the chance to join a team in the hackathon (May 14-15). During the two days, the team has to develop a project proposal for adopting and scaling your solution in the local context of the partner. The implementation partner will contact you beforehand to ask you if you agree to the match.