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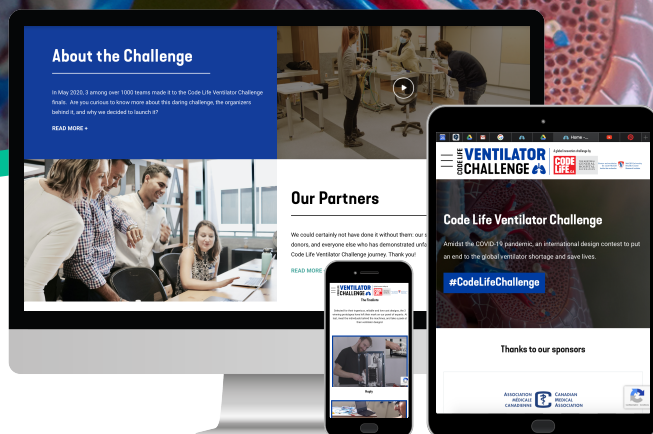
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#GeneralPublic

#COVID19

#Innovation



Executive summary

Code Life, Ventilator challenge : the first Open Innovation operation aimed at responding to the coronavirus crisis.

While it is estimated that approximately 70% of the population may be contaminated with COVID-19, **10% of patients will require respiratory assistance**. Yet the ventilators needed for this treatment are lacking, forcing the medical profession to make agonizing decisions.

Faced with this situation, the Montreal General Hospital Foundation associated with the McGill Research Institute has decided to **solicit innovators from around the world through an open innovation process**.

A jury composed of healthcare experts has been organized to optimize and determine **the three most relevant solutions that can be implemented to respond to the current crisis**.

The challenge: create a solution to locally manufacture artificial respirators in large quantities, very quickly and at a lower cost.



Quickly mobilize thousands of citizens to respond to a global crisis around a public Open Innovation challenge

On March 19, **four days after the announcement of confinement measures by the French government**, Agorize and McGill teamed up to create **Code Life**: an open innovation challenge for the general public to **source ideas to save lives in extreme crisis situations**.

In only 2 weeks, the candidates who participated in this unprecedented hackathon were able to **invent and set up a mock-up** of their project to be tested live during the final of the challenge. The stake: **to mobilize citizens-innovators quickly and efficiently** to be able to create **functional, economical and directly feasible solutions on the spot** by medical staff.

In 2 weeks, participants set up functional and directly implementable prototypes to respond to an unprecedented crisis.

3 selection criteria

Ease

of manufacture of the respirator

Compliance

of the design with specifications

Ability

to replicate the model directly on site.



Résultats

2

weeks of sprint

2639

mobilized innovators

1029

teams

2 681 756

ads impressions

3

prize-winning projects shared with the general public

94

countries

A challenge that was illustrated by its reactivity and the number of ideas generated to save lives.

Winning projects



Haply Montreal, Canada

startup



The Haply Rideau MkII is a quick-release ventilator. It uses state-of-the-art open-source hardware, 3D printers and has the potential to become the fastest prototype to be commercialized worldwide.

Not only is this ventilator easy to design and obtain and made from proven materials, but it also offers functionality equivalent to much more expensive systems.

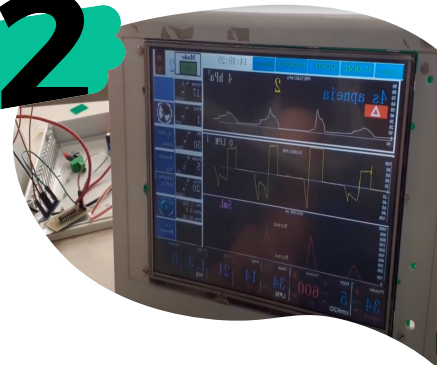
To design this ventilator, the team collaborated with physicists and engineers in Montreal, London, Ontario and Kingwood, Texas.

Prize: 200 000 CAD

IFPR Paraná, Brazil

Teachers, engineers & mechanics

This prototype uses modern engineering techniques and sophisticated mechanical and electronic components. More specifically, this simple and efficient design works with an electromagnetic flow valve to measure and control the air flow to and from the patient. In addition, the device incorporates a graphical display, allowing users to check all parameters controlled and measured by the device on the analysis screen.



Prize: 100 000 \$ CAD



Lung Carburetor Montreal, Canada

Medical device designers



This prototype can operate in different environments autonomously ("outdoors"), or as a fully supervised machine (in a hospital or clinic).

Prize: 50 000 CAD

“It is truly inspiring to see how these teams have been able to achieve so much in so little time and under so many constraints, including operating under COVID protocols and remotely engaging with team members”

Dr. Reza Farivar, Leader of the Code Life Ventilator Challenge.

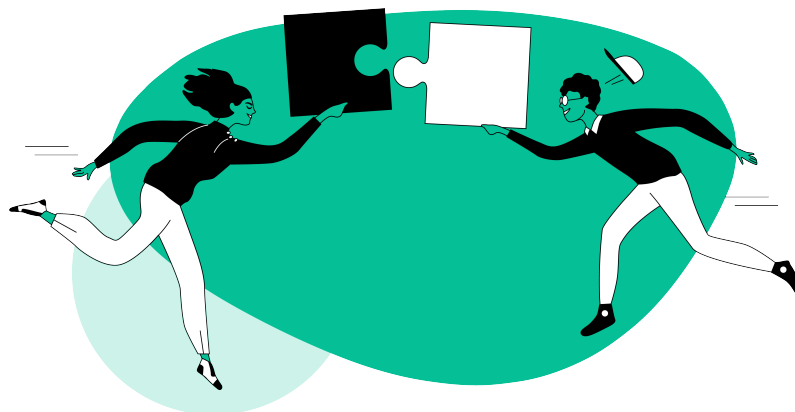
Results & implementation

The level of compensation was determined by the degree of use and production of the different models until October 1, 2020.

Finalist designs and preliminary manufacturing batches were made **available free of charge to qualified manufacturers worldwide** so that the maximum number of ventilators could be produced to help care for COVID-19 patients requiring mechanical ventilation.

About Agorize

Agorize is the **leading global platform for Open Innovation challenges**. Founded in Paris in 2011 with offices across Singapore, Hong Kong, Japan, Germany and Canada, Agorize has ran **over 2000 challenges for 300+ clients** including companies such as Amazon Web Services, AXA, Clarins, Electrolux, Enterprise Singapore, The Hong Kong Jockey Club, Lego, LVMH Fashion Group, Melco Resorts & Entertainment.



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