BACKGROUNDER: COVID-19 Program Feasibility Projects

The Digital Technology Supercluster (Supercluster) invested $60 million to work with Canadian companies, post-secondary institutions and not-for-profit organizations to improve the health and safety of Canadians by supporting Canada's commitment to address the COVID-19 outbreak while building expertise and capacity to respond to future urgent situations.

The Supercluster's COVID-19 Program confirms our commitment to support 'Team Canada' to address COVID-19. Our Supercluster Members and Associates have collaborated to create over 400 ideas and proposals focused on COVID-19. Organizations involved in these proposals represent a broad cross-section of the Canadian economy including healthcare organizations, software companies, industry associations and tech innovators from sectors as diverse as precision health, manufacturing, and data analytics.

By investing in projects that align with the critical needs identified by the Government of Canada and Provincial governments across the country, the Supercluster supports Canada's Plan to Mobilize Industry to fight COVID-19. We work with our Members and Associates to deliver digital solutions that solve problems created by this, and potentially future pandemics.

The Supercluster selected five feasibility studies to be funded as full projects. These are:

COVID Cloud
Lead organization: DNAstack
Collaborators: Global Alliance for Genomics & Health, Hospital for Sick Children, Microsoft

As COVID-19 continues to spread globally, there is a need to understand the virus as well as the interplay between the virus and host at a molecular level, track SARS-CoV-2 evolution and spread, and inform the development of urgently needed public health policies, diagnostics, treatments, or vaccines. A national consortium of industry, academic, and not-for-profit consortium partners, led by DNAstack, will develop COVID Cloud, a software solution that will enable researchers to harness COVID-related genomic and clinical data and deliver timely insights through state-of-the-art biomedical data discovery, analysis, and access. This technology can help track how SARS-CoV-2 is evolving over time and across specific geographic regions, uncover why the virus severity differs between people, and identify or assess the impact of potential solutions.

Lifesaver II
Lead organization: Finger Food Advanced Technology Group (Unity)
Partners: Eventbase Technology, Matador.com, MNP, University of British Columbia

Given the size and diversity of our country, a one-size-fits-all COVID-19 solution does not make sense for all of Canada. In response, Finger Food Advanced Technology Group (now part of Unity) is leading LifeSaver, a project that aims to fill COVID-19 information gaps by consolidating

and harmonizing vast arrays of data. In collaboration with partners such as the University of British Columbia, Team Rubicon, they are developing an interactive tool for businesses, emergency responders and policy leaders to make data-driven decisions that optimally balance operational needs and health risks. Earlier this year, the team built the underlying technical architecture. In phase 2, they are working to provide customized solutions for different types of organizations.

Rapid Repurposing of Drugs for COVID-19 (Raven2)
Lead organization: Variational AI Inc.
Partners: adMare BioInnovations

While the first new vaccines for COVID-19 should be broadly available in 2021, new therapeutic drugs that treat the virus could take years. In response, a feasibility project called Rapid Repurposing of Drugs for COVID-19 (Project Raven) began in April and successfully concluded in July, with a list of 20 drugs that could be repurposed for COVID-19 based on AI data. Led by Variational AI with the support of adMare BioInnovations and the Vancouver Prostate Centre (part of the University of British Columbia), Project Raven2 builds on the first project and extends the scope to find new, safe COVID-19 therapeutics that could be sold commercially in Canada and worldwide.

Scaling Safe Food Delivery for Canadians
Lead organization: Food-X Technologies
Partners: Spud, 1QBit, ETG Consulting, Microsoft

At the start of the pandemic, the volume of online orders for groceries and pharmacy spiked in Canada, making it difficult for grocers to keep up with the demand. In response, Food-X and its partners launched Feeding our Frontlines, a project focused on deploying an e-grocery management system to ensure fresh food is delivered safely to our frontline workers and patients. In recent months, the project team pivoted to introduce the Scaling Safe Food Delivery for Canadians: A Pandemic-Ready eGrocery Solution, covering everything a retailer needs to offer online grocery sales at scale and helping to ensure food security for all Canadians.

Screen O/S
Lead organization: EcoMine Technologies
Partners: Patriot One Technologies Inc., University of British Columbia

Up to 40 per cent of COVID-19 transmissions come from people with pre-symptomatic and asymptomatic disease. In response, EcoScreen Solutions led a study earlier this year with partners such as Nomadic Pictures and Patriot One to assess the feasibility of a low-cost, on-the-spot screening technology to detect COVID-19. Following a successful two-month assessment, Eco-Screen Solutions is now leading Screen O/S, a project initially focused on improved screening for the education sector and film industry. The team is working on a solution for instantly screening pathogens in order to provide reliable and anonymized risk reporting to leaders and regulators, as well as secure and private results directly to students and employees.

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