

Carl Data's Subsidiary FlowWorks Introduces Wastewater Measurement Software for COVID 19

VANCOUVER, May 27, 2020 /CNW/ - Carl Data Solutions Inc. (CSE: CRL, FSE: 7C5, OTC: CDTAF) ("**Carl Data**"), is pleased to announce that its wholly-owned subsidiary FlowWorks, a leading provider of data analytics for wastewater collection systems in North America, has adapted its data collection and monitoring application to assist in the early detection and estimation of SARS-CoV-2 (COVID 19) in wastewater.

Wastewater-Based Epidemiology (WBE) is a new approach utilised to give comprehensive health information on communities. The concept is primarily based upon the extraction, detection and then subsequent analysis and interpretation of chemical and/or biological compounds. SARS-CoV-2 WBE can provide Public Administrators data to assist in making critical public health decisions.

FlowWorks uses a custom designed cloud-based mass storage service that collects and stores very large data sets from virtually any source. The FlowWorks platform accepts data from all sensor types, existing and new, and is used every day to monitor flow, rainfall and other important parameters in thousands of collection system metering points.

Using pre-existing tools and calculations, FlowWorks is able to overlay variables such as level, velocity, flow rates and temperature in addition to the impact of precipitation and water ingress which are necessary to understanding viral load concentrations. The additional datasets are already being collected and calculated for many of the cities currently using the FlowWorks Application and are updated and recalculated multiple times each day. In particular, the FlowWorks *Infiltration and Inflow* tool that uses machine learning to determine the amount of excess water from rain events provides a near real-time calculation for researchers to understand the impact of rainfall and its dilutive effect on viral load samples.

The FlowWorks suite of time series water monitoring tools saves clients time and money by pre-aggregating information from any sensor or source to create a real-time decision support system using advanced analytical tools powered by machine learning and other advanced analytical features. The Application easily integrates with third-party data sources such as SCADA systems, wastewater design specifications, sensor data and third-party information such as weather models to provide updates on the status of a system at a given time. In this use case existing monitoring data and current conditions can be combined with the wastewater samples taken at a given time to append necessary variables that must be accounted for when building Wastewater-Based Epidemiology models.

FlowWorks can efficiently and cost effectively work with billions of data points and run custom scripts against that data in real time. It is widely used across North America by cities and engineering firms to assess the current state of waste and stormwater systems and provide notifications/alarms when sensors indicate that there is a problem.

SARS-CoV-2 testing will continue to be performed in labs through samples collected initially from wastewater treatment facilities. The sampling data, including indicators for SARS-CoV-2, is then uploaded into FlowWorks. Catchments, sub-catchments and locations closer to the actual source can be added as collection points to track and isolate specific areas within the system to further identify the source of the problem.

Toward a goal of helping speed the creation of a robust and reliable SARS-CoV-2 testing solution FlowWorks will waive the fees typically associated with the use of our platform. This will be true for

existing clients and their consulting engineers as well as governments, utilities, and commercial sampling and analysis enterprises.

"Monitoring wastewater shows tremendous potential as a tool to monitor COVID-19 and other viral or bacterial threats to a population. Given that a single test of wastewater yields information about an entire community, whereas, a clinical test only yields information about an individual, the economies of scale are also promising," said Greg Johnston, Carl Data CEO and President. "This process can also be used to early detect other threats to health by understanding the composition and volume of substances in wastewater. We have re-allocated development, set up and support resources to assist in the quick deployment of this system prior to the expected spike of SARS-CoV-2 this fall."

About FlowWorks

FlowWorks is a powerful Software-as-a-Service ("SaaS")-based application for collecting, monitoring and analyzing all types of environmental data in a flexible, affordable and easy-to-use system. The FlowWorks Application has the unique ability to collect data from all types of monitoring equipment, gauges and sensor hardware, SCADA systems and other sources of public and private data to merge the information into a single platform to perform comprehensive analytics and reporting, saving time and money for the end user. More information on the FlowWorks Application can be found at www.FlowWorks.com.

About Carl Data Solutions

Carl Data Solutions Inc. is an Industrial IoT (IIoT) and Big Data as a Service (BDaaS) company that provides next generation collection, storage and analytics solutions for data-centric organizations. Carl, through its subsidiaries Astra Smart Systems and FlowWorks Inc, helps clients analyze and model environmental data through a powerful end-to-end network of custom sensor arrays combined with SaaS based monitoring, reporting, and predictive modelling applications.

Carl Data works with new cloud-based mass storage services and machine learning (AI) analytical tools to provide the scalability required to effectively monitor very large amounts of data collected by both government and industry. The software suite saves clients time and money by aggregating information from any sensor or source to create a real-time decision support system with deep insights into how to protect infrastructure and assets. More information can be found at www.CarlSolutions.com. For further information please contact:

The Canadian Securities Exchange (operated by CNSX Markets Inc.) has neither approved nor disapproved of the contents of this press release.

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CNW 03:00e 27-MAY-20