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MAYOR DE BLASIO ANNOUNCES PRODUCTION OF NEW LINE OF BRIDGE VENTILATORS FOR NYC HOSPITALS

Ventilators to shore up NYC Strategic Reserve, preparing City for next crisis

NEW YORK—Today, Mayor Bill de Blasio announced a breakthrough in the fight against COVID-19, with a City-convened effort producing a new line of bridge ventilators to support local hospitals and health care workers. Local manufacturers will produce at least 3,000 of these devices, which will be deployed to hospitals, helping to save lives by supplementing limited ventilator resources. This effort will also help the City shore up the New York City Strategic Reserve, a stockpile of medical devices that will be ready for any future crisis.

"This is a story about doing the impossible – so it's a New York story," said **Mayor Bill de Blasio.** "We'd never made a ventilator before – and so we made thousands. We learned it would take a year – and so we did it in a month. Our City is taking our future into our own hands. That's how we'll beat this crisis and prepare for the next."

"During this unprecedented crisis, we've seen the strength, creativity and resilience of New York City," said **James Patchett, President and CEO of the New York City Economic Development Corporation.** "This city-led partnership demonstrates New York's ability to act and innovate quickly. In record-time, we've been able to design and produce life-saving technology. This project highlights the very best of New York City and we're proud to be a part of it."

Development Of The Device

The New York City Economic Development Corporation (EDC) convened a partnership comprised of volunteer researchers from MIT and local innovators like Boyce Technologies, Newlab, 10XBeta and Otherlab to rapidly scale up production of a low-cost bridge ventilator.

Inspired by the open-source design of MIT's Emergency Ventilator (E-Vent) prototype, the consortium developed the Spiro Wave, a bridge ventilator that can replace manually operated bag valve masks and serve patients coming on or off traditional ventilators. These machines will free up critical care and ICU ventilators needed for those who are seriously ill. The Spiro Wave received Emergency Use Authorization by the U.S. Food and Drug Administration on

April 17 and has been successfully demoed in a hospital setting by New York City Health and Hospitals staff.

Production Process

EDC provided a seed grant of \$100,000 to adapt and prototype the ventilator design, mobilized and coordinated with New York City Health + Hospitals, New York City Department Of Health and Mental Hygiene, New York City Office of Emergency Management and local hospitals to vet the new technology, and provided regulatory support.

Boyce Technologies, which is leading a revival in industrial manufacturing at its high-tech factory in Long Island City has used machine automation and advanced laser-cutting technology to take the Spiro Wave from initial concept to a scalable manufacturable design in an unprecedented amount of time.

The devices are substantially less expensive than traditional ventilators. EDC has committed to purchase the first 3,000 devices on behalf of the City and distribute them to healthcare facilities and hospitals. Boyce Technologies is in the process of manufacturing hundreds of these devices. The first units will be ready to ship to NYC hospitals this week.

EDC has also secured the right to purchase 70% of all units produced to ensure the needs of local hospitals are met. EDC is focused on getting devices to local hospitals – public and private – that are interested in using them to supplement existing full-scale ventilator resources.

This initiative builds upon a decade of work by the City to preserve and expand advanced manufacturing in New York City. EDC was an initial funder of Newlab, a firm that works to scale frontier technologies, and invested \$3 million in its urban technology portfolio before its doors opened. Only a few years ago, through the New York City Industrial Development Agency, EDC helped Boyce Technologies build the state-of-the-art facility in Long Island City where the devices are initially being produced.

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