

Special Notice: xTech|COVID-19 Ventilator Challenge

Background:

The Army is conducting a change of mission to focus on combating the COVID-19 pandemic. With this new mission, the Army will protect the force, posture the force to maintain global operational readiness, and support the national effort to fight against COVID-19. The Army continually assesses how we will best protect Soldiers, Civilians and their families, maintain force readiness to meet global challenges, and provide support to the FEMA-lead national COVID-19 response.

Accordingly, effective immediately, the Army Acquisition Executive is launching the xTech: COVID-19 Ventilator Challenge to all innovators across the nation. The Army solicits the innovation community's ideas for combatting this unprecedented modern pandemic. The prize competition will evaluate technology proposals immediately upon submission and award novel solutions with a prize of \$5,000 to present a virtual pitch of the technology concept to the xTech COVID-19 panel, and award prizes of \$100,000 to solutions accepted by the panel to develop a concept prototype. Select technologies may receive follow on contracts for additional production and deployment. The efforts described in this Notice are being pursued under the authorities of 10 USC 2374a.

Problem Statement:

The Army seeks a low-cost, readily manufacturable emergency ventilator to quickly augment ventilator capacity in the exigent COVID-19 pandemic. The technology solution must provide a rapid response breathing apparatus capable of short-term, rugged field operation. In addition, the ventilator must be low cost, require minimal components, with a small footprint, and designed for mass production. Ideally, the technology would support field hospitals that are still acquiring critical infrastructure such as generators, power distribution and pressurized oxygen. The objective capabilities include:

- Readily manufacturable materials and parts
- Accommodate standard hoses and fittings
- Respiratory rate of 0 to 60 bpm
- Tidal volume of 50 to 1000 mL
- Ability to measure and control peak inspiratory pressure
- Adjustable inspiratory to expiratory time ratio
- Ability to support triggered breaths
- Provides Positive End Expiratory Pressure (PEEP)
- Able to use ambient air, or low pressure oxygen
- Able to operate off generator power sources
- Able to trigger alarms for key critical parameters, such as disconnect from patients, apnea, pressure, power failures;

Program Submission:

The Ventilator Challenge is voluntary and open to all US-based entities. Registration information and upload submission will be accepted beginning 5 April 2020 and will be reviewed upon receipt. Submissions that are approved by the Ventilator Challenge judging panel will be invited to deliver a virtual pitch to the panel starting on 13 April 2020. Virtual pitch schedules are dependent on submission date and will be scheduled with selected submitters. Applicants should be prepared to deliver a virtual pitch of their concept within 1 week of submitting the application.

Register now:

<https://www.xtechsearch.army.mil/>

All Ventilator Challenge submissions are treated as privileged information and contents are disclosed to Government employees or designated support contractors only for the purpose of evaluation and program support.

Detailed feedback will be provided to all participants at the end of each phase. The purpose of providing this feedback is to help accelerate transition of the technology by providing suggestions for product improvement, and recommended next steps for development.

Submission Format

Part 1: Concept Submission Quad Chart and Video

All eligible entities shall submit a concept quad chart and accompanying video up to 3 minutes in length outlining their technology, the technical viability of their approach, human and clinical risk, and speed to production. Please adhere to the following requirements:

- All concept quad charts must be submitted using the template found on the registration page, "xTechCOVID19_QuadChart_Template.ppt". Any proposals submitted in a format other than that provided by the template will not be reviewed.
- Please include on your quad chart your company name, proposal title, and company logo EXACTLY how you would like them to appear on any contest marketing materials.
- Provide an optional URL on the contest registration page to a video supporting your application. Production value does not matter at all, and the can be used to explain the concept, brief the quad chart, or to otherwise demonstrate the technology concept proposed. MAXIMUM of 3-minutes for the video's length.

Each application will be reviewed by a panel of experts from the Army, medical, and manufacturing communities. Applicants selected to support the requirements of this posted solicitation will receive a prize of \$5,000 and advance to Part 2: Technology Pitches.

Part 1 applications will be evaluated and ranked using the following Scoring Criteria (further details on each scoring dimension can be found on the xTech|COVID-19 registration page):

- Requirements Alignment – 30%
- Technical Viability – 20%
- Regulatory – 20%
- Speed – 30%

Part 2: Technology Pitches

Selected participants will conduct a virtual pitch to the Ventilator Challenge panel of Army, medical, and manufacturing experts. Detailed pitch instructions and evaluation criteria will be provided to selected applicants. Technology pitches selected to meet the requirements of this posted solicitation will receive a prize of \$100,000 and will be invited to develop and demonstrate a concept prototype to potentially receive follow on contracts for additional production and deployment.

Prizes & Incentives

Prizes will be offered under 10 USC §2374a (Prize competitions). The total prize pool is \$1.0 M.

Phase	Number of Winners	Prize
Application Part 1: White Paper	TBD	\$5,000
Application Part 2: Technology Pitches	TBD	\$100,000
Total		NTE \$1,000,000

Proposed Schedule (Subject to Adjustments)

Date	Activity
5 April 2020 – TBD	Application Part 1: Submission period open
13 April 2020 - TBD	Application Part 2: Pitch scheduling period open

Intellectual property

The Army is a strong proponent of deliberate intellectual property (IP) rights and management by the private sector and the Department of Defense.

For the xTech: COVID-19 Ventilator Challenge:

- The Federal Government may not gain an interest in IP developed by a participant without the written consent of the participant;
- Nothing in this Ventilator Challenge shall diminish the Government's rights in patents, technical data, technical information, computer software, computer databases, and computer software documentation that the Government had prior to this competition, or is entitled to, under any other Government Agreement or contract, or is otherwise entitled to under law; and
- The Federal Government may negotiate a license for the use of IP developed by a registered participant in the prize competition.

Register now:

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Point of Contact

The xTech COVID-19 Team

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