NASA

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A Workforce Rallies to Respond to the COVID-19 Pandemic

NASA stands for National Aeronautics and Space Administration. NASA is a United States government agency that is responsible for science and technology related to air and space, but when the COVID-19 pandemic hit the United States in March 2020, **the prevailing, can-do NASA workforce expressed their desire to help the nation combat COVID-19.**

On April 1, NASA launched an agency wide call for ideas on its internal crowdsourcing platform NASA@WORK, hosted on IdeaScale's software. The internal website fosters collaboration and provides NASA employees with an inventive way to share knowledge and solve challenges, but for this series of challenges, NASA had coordinated with FEMA and the White House to determine areas of need that also overlapped with NASA's mission and expertise and they **identified three focus areas: personal protective equipment, ventilation devices, and monitoring and forecasting the spread and impacts of the virus.**

In order to activate and enlist the help of the 60,000 NASA employees and contractors, not only did the NASA@WORK team send out their normal newsletter, but top leadership from NASA administrators included it in their communications, others mentioned the challenge in NASA's town hall meeting, and also during a press conference. Due to this focused and concerted communications campaign, the NASA@WORK community grew by over 1,500 participants in just a few weeks. **Over 3,000 page views were driven by a single email from the NASA Administrator.** 219 employees who had never logged into the site did so within 30 minutes of the Administrator's email.

All together, **those participants generated 250 unique ideas from 220 idea submitters** with the entire community contributing 621 comments and 4635 votes. **This beat out all other previous engagement records for historic NASA@WORK challenges.** That's how excited the workforce was to assist during such a critical time.

NASA subject matter experts moderated and reviewed the submissions, evaluating the ideas based on whether they could meet an immediate need and whether or not NASA was well positioned to contribute to the solution as it was outlined by the submitter. **The evaluation team shared several submissions with relevant in-progress efforts across the agency to see if NASA@WORK ideas could add value. Additionally, they identified new ideas they believed it would be worthwhile for NASA to pursue.** Those ideas were presented to senior leadership by the COVID-19 Capability team for potential implementation.

The NASA@WORK ideas added value to several projects, including using NASA's **supercomputing capability to advance research for treatments and a vaccine, as well as offering their artificial intelligence expertise to develop new data mining techniques** for answering high-priority scientific questions related to COVID-19.

Other ideas have informed the **efforts that have led to new virus tracking and forecast modeling apps, 3D printed masks and other PPE equipment, impact visualizations, NASA-modified ventilators, sensors for virus detection, and more. Seven of those ideas have already been implemented,** and since the challenge ended, several ideas have continued to pursue funding through their center champions; efforts like the **E-Nose COVID breathalyzer have recently secured $3.8M in funding from Health and Human Services** to support development of the viral detector through an Ames Research Center -Goddard Space Flight Center collaboration.

When commenting on the initiative, Carissa Callini, NASA@WORK program lead said, **"At times it seemed as elegant as a space launch**. It was exciting to see so many people submit ideas that spanned so many different disciplines and expertise as well as capture the creativity of the NASA workforce."