



Technology Leaders, Designer Launch Maker Mask Initiative to Offer First Medically Approved Design for 3D Printing of Protective Masks to Assist with COVID-19 Response

Grassroots effort mobilizes community-based small batch production of masks to fill PPE shortages

SEATTLE, March 30, 2020 – Maker Mask, a nonprofit initiative organized by leaders in technology, industry, and government, today announced the availability of the first medically-approved design for 3D printer protective masks to help fill the critical need for high-quality personal protective equipment (PPE) due to the COVID-19 pandemic using community-based, small batch production.

Maker Mask is making these respirator-style masks available to the public and government free-of-charge through an open source model. Developed by Rory Larson, inventor of Maker Mask, the masks can be manufactured using commonly available materials and hobbyist grade 3D printers for a cost of about \$2.00 to \$3.00 per unit for materials.

Building on the concept of a wide network of community-based manufacturing operations as a powerful tool for assisting in COVID-19 response efforts, Maker Mask has launched a crowd-sourcing pilot in Seattle. Equipped with 20 3D printers – with 20 more 3D printers to be operational within days --and supplies, the team is operating 24 hours a day manufacturing masks and will be making nearly 1,000 masks per week by Friday. Soon hundreds of small batch production sites are expected to be operating across the country.

The Maker Mask team is being led by Jonathan Roberts, co-founder of nonprofit RPrime which is funding the Maker Mask initiative. He is also a founder and partner at Ignition Partners, a venture capital firm based in Bellevue, Washington. Roberts recognized the potential for the Maker Mask concept to unleash the power of 3D printing across the public and private sectors. He quickly formed a group of leaders in industry, government, and technology to proliferate Larson’s design and to promote community production.

“The COVID-19 pandemic is an all-hands-on-deck crisis. It feels good to be able to take action and start getting respirators to clinicians, first responders, and essential service workers. Sophisticated hobbyists

with a \$300 3D Printer can get a respirator to their neighbors within hours,” said Roberts. “To help this effort scale, we’re establishing a strong ecosystem and a network of small batch production sites that will support tremendous production potential. It’s an opportunity for everyone from individuals, hospitals, communities, churches, schools, industry, to government organizations to cooperate and respond to this critical need. People who would like to help with this effort and need mask designs should go to the MakerMask.com website.”

The Maker Mask team, in collaboration with a rapidly growing ecosystem of outstanding organizations including the [National Institutes of Health \(NIH\)](#), [America Makes](#), getusppe.org, [InfraGard National](#), [Matter Hackers](#), [Nation of Makers](#), [MITRE](#), [Teach for America](#), the [U.S. Department of Veterans Affairs](#), the U.S. Military, [Whiteford Taylor & Preston](#), and several other organizations and corporate partners, is working to address the nationwide shortage of personal protective equipment.

Maker Mask – Reviewed and endorsed by medical professionals

The Maker Mask stands out as the only medical community reviewed and endorsed open-source 3D printable mask. The design allows CAD-based 3D mask printing to be combined with readily available, replaceable components such as weather stripping, elastic, and vacuum cleaner bags. The mask is reusable, has replaceable filters, and heat-molds to each wearer’s individual face for an airtight fit. Because it is reusable by just changing the filter, one Maker Mask is the equivalent of 300 disposable masks over a two month period.

“I wanted to help with the COVID-19 response,” said Larson. “I’m good at 3D printing design and wanted to apply my skills to see if I could address the lack of masks issue. This mask is easy to make with a common hobbyist 3D printer yet closely matches the functionality of commercial masks.”

The Maker Masks are nearing NIH approval. In addition, several doctors in the Seattle area have endorsed the Maker Mask including Xuan Qin, PhD, D(ABMM), a professor of Laboratory Medicine at University of Washington and Seattle Children’s Hospital. The first set of masks are currently being used at Seattle Children’s Hospital, which has given provisional medical approval for these masks to be used by lab technicians processing samples.

Dr. Qin called Maker Mask, “nicely designed,” and “really useful” for laboratory technicians who process patient specimens for COVID-19. Dr Qin said that the mask “will help solve shortages of personal

protective equipment.” She is overseeing a clinical study and has already deployed the masks to help fill a critical need.

People interested in learning more about the Maker Mask initiative and how to make these masks should join an educational webinar to be held on Thursday, April 2 at 1:00 pm PST. More information is available at www.makermask.com. The group designed the digital media platform to be a place where interested parties can collaborate, coordinate, and access information about the mask design, training, components, and production instructions. Maker Mask is receiving funding from nonprofit corporate sponsors through the RPrime Foundation, a 501(c)(3) nonprofit. A patent for Maker Mask is pending.

The Maker Mask initiative is enabling communities to create necessary goods locally and quickly will lessen the spread of disease, protect more people, reduce burdens on medical facilities/Department of Defense/governments, and give Americans something they can do to be part of the solution to this pandemic, while building and training capability for the future.

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Megan McKenzie
McKenzie Worldwide
meganm@mckenzieworldwide.com
+1 503.470.0197 (mobile)
+1 503.625.3680 (office)