

COVID-19 Community Innovation Stories, Week of August 10, 2020

In the face of the coronavirus disease (COVID-19) pandemic, the country is seeing innovations in communities that highlight the best of human ingenuity. We highlight these stories to show how many are helping those around them, and prompt everyone to think about how they can help others.¹

Personal Protective Equipment

Recycling Fishing Nets into Face Shields

In Thailand, the Environmental Justice Foundation (EJF) and a design company are paying fishermen for discarded fishing nets to recycle into face shields, disinfectant bottles, and push-sticks for elevators and ATMs. This opportunity not only supports the response to COVID-19 by introducing pandemic-related products into the supply chain, but it also: removes an excess of nets from the ecosystem; introduces a new, profitable venture for small-scale fishermen; and offers a rare, all-domestic solution to a global challenge. EJF reported that the project had collected more than approximately 1.4 tons of used nets since a pilot phase two months ago and plans to expand it to all seaside provinces by year-end.²

Custom, Digitally-Fitted Face Masks

An Alabama-based company creates custom-made, digitally-fitted masks that meld to every contour of the user's face. The company combines custom-molded silicone with high-tech 3D printing that is marketed as a "100% impermeable" mask that can be printed in many colors or even with a corporate logo to the front cover. In addition to the mask, the company offers a discounted subscription plan that automatically ships filters. Since May, the company has sold hundreds of masks, with most going to health care providers nationwide.³

Monitoring Mask Use in Schools

A digital solutions company created an artificial intelligence (AI)-based mobile application that offers a plug-and-play digital solution enabling educational institutions to comply with government health and safety protocols in response to COVID-19. Using the institutions' existing CCTV infrastructure, the app monitors key parameters including body

¹ This document contains references and links to non-federal resources and organizations. This information is meant solely for informational purposes and is not intended to be an endorsement of any non-federal entity by FEMA, U.S. Department of Homeland Security, or the U.S. government.

² 2020 World Economic Forum, Net gains: Thai project turns fishing nets into virus protection gear, <https://www.weforum.org/agenda/2020/07/thailand-coronavirus-covid19-recycling-innovation-supplies-ocean/>

³ 2020 Alabama Newscenter, Obex Health creates tailor-made face masks to keep people safe from COVID-19, <https://alabamanewscenter.com/2020/08/04/obex-health-creates-tailor-made-face-masks-to-keep-people-safe-from-covid-19/>



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temperature, mask usage, physical distancing, and sanitization processes. The app automates government-required compliance reports and provides real-time alerts to parents and administrators in an effort to keep the community safe.⁴

Local Business

Business School Supports Local Businesses

This fall, the Innovation Group at a business school in New Mexico is offering to help New Mexico's businesses respond to the management challenges of the new COVID-19 low-touch economy. The partnership involves connecting local businesses to student teams to assist with the following business challenges: analyzing firms' financial performance and plans; commercializing technology products and services; improving project management processes and plans; managing technology-related operations; and writing or revising business plans. The program may also provide enrolled students with paid internships to supplement the business school's ongoing programs in experiential learning and faculty mentoring.⁵

Retail and Restaurant Rating System

A French firm developed a technological solution to help retailers assess their customers' experiences by offering clients a collection of online customer reviews from a variety of sources and a verification of their legitimacy. The company uses its verification capabilities to certify which retailers and restaurants follow industry best practice on anti-virus measures, such as disinfecting and social distancing. In addition, the [product](#) offers each qualifying location a certificate that can be placed in the establishment's window to indicate compliance with recommended safeguards, much like health departments in some cities offer to restaurants after their examination. Since July, the product has garnered 1,000 company subscribers in Europe and the company is now planning to expand across continents.⁶

Cashier-Free Technology License

A little over two years ago, a technology company opened a convenience store powered by technology originally used in self-driving cars – computer vision, sensor fusion and deep learning – and repurposed to enable shoppers to place items in bags and simply walk out of the door. Now, this technology is being licensed and may help with social distancing and help consumers stay out of potentially contaminated areas for long periods of time during the COVID-19 pandemic.⁷

Online Supply Chain Mapping Tool

The Asian Development Bank (ADB) has partnered with a leading producer of data and analytics for trade and trade finance to develop an online mapping tool that identifies companies around the world that are supplying raw

⁴ 2020 PRNewswire, New AI-based Mobile App "Wai-Eye" to assist schools in COVID-19 Compliance, <https://www.prnewswire.com/news-releases/new-ai-based-mobile-app-wai-eye-to-assist-schools-in-covid-19-compliance-301106320.html>

⁵ 2020 UNM Newsroom, Anderson School's Innovation Group to help New Mexico's businesses respond to COVID-19 management challenges, <http://news.unm.edu/news/anderson-school-s-innovation-group-to-help-new-mexicos-businesses-respond-to-covid-19-management-challenges>

⁶ 2020 Forbes, Covid-19: A Mother Of Innovation, <https://www.forbes.com/sites/miltonezrati/2020/07/18/covid-19-a-mother-of-innovation/#39fda41c6278>

⁷ 2020 MarketWatch, Opinion: As coronavirus hits hard, Amazon starts licensing cashier-free technology to retailers, <https://www.marketwatch.com/story/as-coronavirus-hits-hard-amazon-starts-licensing-cashier-free-technology-to-retailers-2020-03-31>

materials and distributing final products in support of the response to COVID-19. The tool lists company names, websites, contact information, revenue, and number of employees so that procurement specialists can determine a company's manufacturing capacity, in turn helping governments, organizations, and health systems identify companies that are involved in the supply chain for critical products, such as surgical masks, ventilators, and respirators. The bank is currently looking to expand the functionality of the tool by adding certification information from regulatory agencies, such as the U.S. Food and Drug Administration (FDA).⁸

Volunteer Matching Platform

A new platform matches elder or immunocompromised residents in Oakland, California, with low-risk volunteers who can pick up groceries and prescriptions, call regularly to check in, and assist with accessing telehealth during the COVID-19 pandemic. Over the past four months, the initiative has helped 350 individuals. Although this service is currently only available in Oakland, California, the initiative's website provides instructions for volunteers at other cities to launch a similar platform. The website also provides a flyer for print advertising and a phone contact for volunteer matching for those who do not have internet access.⁹

Building Surface and Air Duct Testing

As offices and schools reopen with testing protocols for employees and students, the University of Oregon's Institute for Health in the Built Environment is piloting the incorporation of regular testing of building surfaces and air ducts for the COVID-19 virus. Results arrive in 24 hours, and a positive result can indicate the likelihood of employees or students in the building having COVID-19 before they begin exhibiting symptoms.¹⁰

Drones in Warehouse and Distribution Centers

An extension of its technology-assisted processes, a distribution center in Lancaster, Texas, launched a fleet of drones to automatically conduct scans of pallet barcodes. Because frequent inventory counts at this facility consumed valuable resources yet were necessary to meet customer expectations, the company invested in inventory drones that could aerially and autonomously scan front-facing barcodes across all the very narrow aisle (VNA) racking at its distribution center. This is one of many efforts to reduce human contact in the workplace amidst the COVID-19 pandemic.¹¹

FEMA's Best Practice Initiative

There are extraordinary efforts nationwide, and from partner nations, to support personnel and resource needs to battle the COVID-19 pandemic. FEMA is working to highlight these efforts and encourage everyone to think about what they can do to be a part of providing solutions to help. Visit <https://www.fema.gov/coronavirus/best-practices> for more information.

⁸ 2020 Devex, ADB eyes expansion of COVID-19 supply chain map, <https://www.devex.com/news/adb-eyes-expansion-of-covid-19-supply-chain-map-97541>

⁹ 2020 Patch, The CA Seniors Left Behind By A Telehealth Tech Divide, <https://patch.com/california/ramona/s/h6mum/coronavirus-bay-area-seniors-who-are-left-behind-telehealth-tech-divide>

¹⁰ 2020 ABC News, Testing buildings may become added weapon in coronavirus reopenings, <https://abcnews.go.com/GMA/News/testing-buildings-added-weapon-coronavirus-reopenings/story?id=71956136>

¹¹ 2020 Auto Service World, Warehouse innovation: Drones reduce human interaction during Covid, <https://www.autoserviceworld.com/warehouse-innovation-drones-reduce-human-interaction-during-covid/>

Topics for the “Best Practices” series are generated from crowd-sourced suggestions. Have an idea? Let us research it! Organizations and individuals can e-mail best practices or lessons learned to fema-cipsupport@fema.dhs.gov.

For more information on how to help during COVID-19, visit [FEMA's website for information on donations and volunteering](#).

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