

COVID-19 Best Practice Information: Re-Orienting Business Production

Background

- Globally, hospitals have faced significant increases in the demand for critical supplies such as personal protective equipment (PPE), testing kits, and ventilators. Companies across industries repurposed their production capabilities to support the response to the coronavirus pandemic disease (COVID-19).
- Due to the influx of individuals purchasing large quantities of food, beverages, and household items at the beginning of the COVID-19 crisis, stores are now facing a shortage of many supplies. This document highlights best practices and creative solutions instituted by companies to address emergent needs.¹
- The following is a list of key findings and considerations for jurisdictions and communities regarding ongoing COVID-19 operations across the country. These are best practices for consideration and do not constitute and should not be considered as guidance in any way.²

Key Considerations

- As of April 2, 2020, the United States (U.S.) President invoked the Defense Production Act. The Act aids domestic manufacturers in securing the supplies they need to build ventilators.³ On April 28, 2020 Executive Order 13917 was signed giving the Secretary of Agriculture the authority to utilize DPA if needed to help food processing facilities continue to operate and protect established food supply chains.⁴
- The United States Department of Agriculture (USDA) is working to support the U.S. food and agriculture sector in efforts to provide access to safe and robust food supply. The USDA and Food and Drug

¹ 2020 Supermarket News, How the coronavirus crisis is changing grocery shopping,

<https://www.supermarketnews.com/center-store/how-coronavirus-crisis-changing-grocery-shopping>

² 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.

³ 2020 The White House, Statement from the President Regarding the Defense Production Act,

<https://www.whitehouse.gov/briefings-statements/statement-president-regarding-defense-production-act-2/>

⁴ 2020 Federal Register, Delegating Authority Under the Defense Production Act with Respect to Food Supply Chain Resources During the National Emergency Caused by the Outbreak of COVID-19,

<https://www.federalregister.gov/documents/2020/05/01/2020-09536/delegating-authority-under-the-defense-production-act-with-respect-to-food-supply-chain-resources>



FEMA

Administration (FDA) announced a [Memorandum of Understanding \(MOU\)](#) to help prevent interruptions at FDA-regulated food facilities.⁵

Lessons Learned Related to COVID-19 and Re-Orienting Production Facilities

Medical

Personal Protective Equipment

- **Potential Best Practice:** A clothing company with factories in the United States converted one of its factories to manufacture medical-grade masks and gowns. The company plans to produce 150,000 masks daily.⁶
- **Potential Best Practice:** A mattress manufacturing company partially reprioritized their supply chain to manufacture face masks and supply additional fabrics for masks.⁷
- **Potential Best Practice:** An automobile manufacturer expanded efforts to produce face shields, face masks, and leads an effort to scale production of reusable gowns for healthcare workers.⁸
- **Potential Best Practice:** An activewear and lifestyle apparel company is leveraging its manufacturing facilities to produce cotton face masks for healthcare workers and individuals involved in the response to COVID-19. The company expects to produce up to 10 million face masks weekly in the United States and in Central America.⁹
- **Potential Best Practice:** A vehicle manufacturer is producing aspiration boxes from materials used to develop windshields in vehicles. Aspiration boxes shield nurses and doctors from secretions when removing a COVID-19 patient's intubation tubes.¹⁰
- **Potential Best Practice:** Multiple sporting equipment manufacturers have partnered to produce face shields at factories in Canada and the US.¹¹

⁵ 2020 USDA, USDA, FDA Strengthen U.S. Food Supply Chain Protections During COVID-19 Pandemic, <https://www.usda.gov/media/press-releases/2020/05/19/usda-fda-strengthen-us-food-supply-chain-protections-during-covid>

⁶ 2020 National Retail Federation (NRF), Retailers lead mask production to combat COVID-19, <https://nrf.com/blog/retailers-lead-mask-production-combat-covid-19>

⁷ 2020 Triad Business Journal, Culp will reorient production to make critical health care products, <https://www.bizjournals.com/triad/news/2020/03/26/culp-to-make-critical-health-care-products.html>

⁸ 2020 Ford Media Center, Ford To Produce Respirators, Masks for COVID-19 Protection in Michigan; Scaling Up Production of Gowns, Testing Collection Kits, <https://media.ford.com/content/fordmedia/fna/us/en/news/2020/04/13/ford-to-produce-respirators-masks-covid-19.html>

⁹ 2020 GlobeNewswire, Delta Apparel Shifts Production to Produce Cotton Face Masks to Help Fight Spread of COVID-19, <https://www.globenewswire.com/news-release/2020/04/14/2015696/0/en/Delta-Apparel-Shifts-Production-to-Produce-Cotton-Face-Masks-to-Help-Fight-Spread-of-COVID-19.html>

¹⁰ 2020 Detroit News, Michigan Mahindra plant makes medical shields from windshields, <https://www.detroitnews.com/story/business/autos/2020/04/14/michigan-mahindra-plant-makes-aspiration-boxes-windshields/2988658001/>

¹¹ 2020 Forbes, Coronavirus Business Tracker: How The Private Sector Is Fighting the COVID-19 Pandemic, <https://www.forbes.com/sites/giacomotognini/2020/04/01/coronavirus-business-tracker-how-the-private-sector-is-fighting-the-covid-19-pandemic/#66cf96ba5899>

- **Potential Best Practice:** A Brazilian sandals manufacturing company converted its factories to produce PPE for healthcare professionals, including masks, sanitizers, and COVID-19 test kits in their home nation.¹²
- **Potential Best Practice:** An airline company delivered 500,000 surgical masks and manufactured face shields for hospital workers.¹³

Medical Equipment

- **Potential Best Practice:** A technology company that manufactures household appliances has designed and produced a new bed-mounted and portable ventilator. The company is seeking regulatory approval from the United Kingdom to be able to distribute to those in need.¹⁴
- **Potential Best Practice:** An electric vehicle and clean energy company is repurposing multiple components from its cars to create a new kind of ventilator which will speed up production by using existing parts.¹⁵
- **Potential Best Practice:** An architectural 3D printing company in China delivered 3D-printed quarantine rooms to a hospital. The small individual quarantine booths were designed to reduce the burden on hospitals.¹⁶
- **Potential Best Practice:** A global provider of 3D printing services released files for a 3D-printed hands-free door handle attachment to alleviate COVID-19 transmission by allowing individuals to open doors with their forearms or elbows.¹⁷ In addition, numerous 3D printing businesses have shifted regular production to make patient sampling swabs and ventilator parts.¹⁸
- **Potential Best Practice:** An industrial packaging company configured its existing equipment to develop specimen shipping bags that meet COVID-19 sample shipping regulatory requirements.¹⁹
- **Potential Best Practice:** A luxury bedding and mattresses company shifted its bedding production operations to producing beds for clinics and temporary health facilities to offset the strain on bedding equipment across the nation.²⁰

¹² 2020 Harper's Bazaar, The Fashion and Beauty Companies Helping to Combat the Effects of Coronavirus, <https://www.harpersbazaar.com/fashion/designers/a31901094/fashion-beauty-companies-coronavirus-donation/>

¹³ 2020 Delta, Delta Flight Products to manufacture personal protective equipment to help healthcare workers, <https://news.delta.com/delta-flight-products-manufacture-personal-protective-equipment-help-healthcare-workers>

¹⁴ 2020 The Verge, Dyson developed and is producing ventilators to help treat COVID-19 patients, <https://www.theverge.com/2020/3/26/21195433/dyson-ventilators-covent-coronavirus-develop-produce-uk-nhs-donate-vacuum-motor>

¹⁵ 2020 The Verge, Tesla previews ventilator powered by Model 3 tech, <https://www.theverge.com/2020/4/6/21209370/tesla-ventilator-coronavirus-covid-19-model-3-car-parts>

¹⁶ 2020 3D Printing Industry, 3D Printing Community Responds to COVID-19 and Coronavirus Resources, <https://3dprintingindustry.com/news/3d-printing-community-responds-to-covid-19-and-coronavirus-resources-169143/>

¹⁷ Ibid.

¹⁸ Ibid.

¹⁹ 2020 The Southern, 'Pop-up' production line at Carbondale plant producing specimen shipping bags for COVID-19 tests, https://thesouthern.com/business/local/pop-up-production-line-at-carbondale-plant-producing-specimen-shipping-bags-for-covid-19-tests/article_e4a20ac9-31d6-533c-ae5e-ef70ce979a37.html

²⁰ 2020 Mebane Enterprise, Business Spotlight: Iconic Mebane brand aiding in COVID-19 fight, http://www.mebaneenterprise.com/business/article_e343727c-7e52-11ea-8c00-0748a3acb58b.html

- **Potential Best Practice:** A textile manufacturing company is producing bed covers for hospitals and other fabrics used for mattress and furniture products are being supplied to healthcare facilities, nursing homes, emergency shelters, hotels and other residential facilities.²¹

Hygiene

- **Potential Best Practice:** Numerous large-scale distillers transitioned to produce gallon-sized bottles of hand sanitizer for first responders, healthcare workers, and employees at businesses deemed essential.²² In addition, a large beer company is manufacturing over a million bottles of hand sanitizer and disinfectant alcohol liquid to be donated to hospitals and frontline workers, globally.²³
- **Potential Best Practice:** A multinational luxury goods conglomerate is utilizing their perfume and cosmetic facilities to produce hydroalcoholic gel. The company donates the gel to French health authorities and public hospitals.²⁴

Food/Non-Medical Supplies

Food

- **Potential Best Practice:** American chain fast food services and casual restaurants have launched a service where customers can purchase grocery items from these chains that have been difficult to buy as a result of the outbreak. Individuals are advised to call local stores and place orders online for pick-up.²⁵
- **Potential Best Practice:** Food distributors have begun selling fresh produce and other staples in bulk online and in-person to the general public. Some services are offering curbside pick-up and/or delivery.²⁶
- **Potential Best Practice:** Popular restaurants have started to sell their spice blends, seasonings, sauces and meal-kits for families to re-create the experience at home.²⁷
- **Potential Best Practice:** An airline company has donated 200,000 pounds of food to hospitals, food banks, and other community groups.²⁸

²¹ 2020 Triad Business Journal, Culp will reorient production to make critical health care products, <https://www.bizjournals.com/triad/news/2020/03/26/culp-to-make-critical-health-care-products.html>

²² 2020 MLive, Muskegon distilleries convert spirits to sanitizer during coronavirus outbreak, <https://www.mlive.com/news/muskegon/2020/04/muskegon-distilleries-convert-spirits-to-sanitizer-during-coronavirus-outbreak.html>

²³ 2020 AB InBev, AB InBev is manufacturing over 1 million bottles of hand sanitizer to donate to hospital and frontline workers around the world, <https://www.ab-inbev.com/news-media/news-stories/beer-can-appreciation-day/ab-inbev-is-manufacturing-over-1-million-bottles-of-hand-sanitiz.html>

²⁴ 2020 Business of Fashion, LVMH to Manufacture Disinfectant Gel in French Factories to Help Prevent a Hand-Sanitizer Shortage, <https://www.businessoffashion.com/articles/news-analysis/lvmh-to-manufacture-disinfectant-gel-in-french-factories-to-help-prevent-a-hand-sanitizer-shortage>

²⁵ 2020 TODAY, Panera, Subway and more selling groceries during coronavirus pandemic, <https://www.today.com/food/panera-subway-more-selling-groceries-during-coronavirus-pandemic-t178477>

²⁶ 2020 3WTKR, Food distributors sell to general public amid COVID-19 pandemic, <https://www.wtkr.com/news/national/coronavirus/food-distributors-sell-to-general-public-amid-covid-19-pandemic>

²⁷ 2020 The Infatuation, 34 NYC Restaurants Selling Groceries and Meal Kits, <https://www.theinfatuation.com/new-york/guides/nyc-restaurants-selling-groceries-and-meal-kits>

²⁸ 2020 Delta, Delta has 200,000 pounds of food we can't use. So we're giving it to people in need, <https://news.delta.com/delta-has-200000-pounds-food-we-cant-use-so-were-giving-it-people-need>

Household Supplies

- **Potential Best Practice:** A popular delivery service, in partnership with a pharmacy store chain, expanded on-demand delivery services nationwide for health and wellness items. In addition, individuals can order over-the-counter medications, first-aid items, and baby supplies.²⁹
- **Potential Best Practice:** An American company prioritized the stocking and shipping of essential items such as commonly used household items and medical supplies.³⁰

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.

²⁹ 2020 Business Wire, Walgreens and Postmates Expand On-Demand Delivery Service to 7,000 Stores Nationwide, <https://www.businesswire.com/news/home/20200331005462/en/Walgreens-Postmates-Expand-On-Demand-Delivery-Service-7000>

³⁰ 2020 TIME, Amazon Says it's prioritizing Household Staples, Medical Supplies As it Struggles With Coronavirus Orders, <https://time.com/5804645/amazon-shipping-prioritization/>