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Supply Chain Brief: The 4 Questions to Ask When Repurposing Capacity to Combat the Coronavirus

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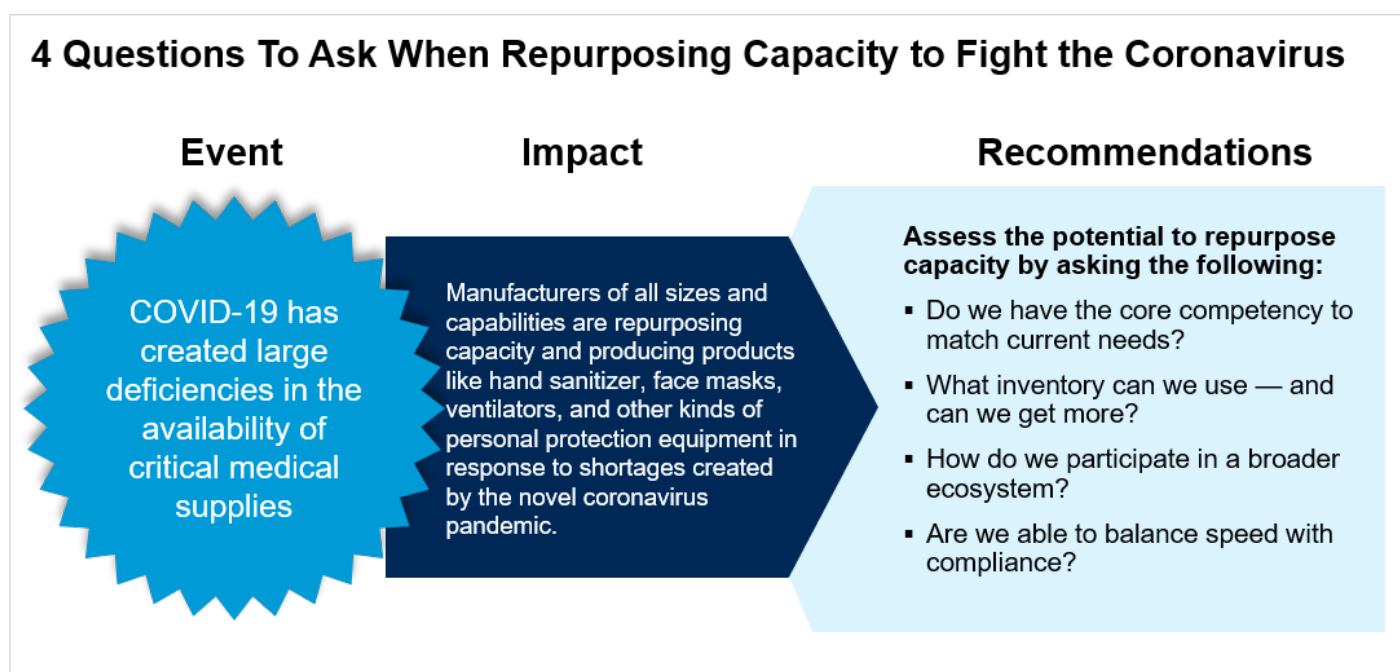
Innovative manufacturers are repurposing their capacity to address gaps created by COVID-19 and inspiring peers to follow suit. This research addresses the key questions supply chain leaders responsible for manufacturing operations strategy and performance need to answer when considering a pivot.

What You Need to Know

Manufacturers of all sizes and capabilities are reorienting capacity and producing products like hand sanitizer, face masks, ventilators and other kinds of personal protection equipment (PPE) in response to shortages created by the novel coronavirus pandemic. This research highlights the initial wave of innovations and lays out the four key questions that organizations need to ask when making such a radical pivot (see Figure 1).

Analysis

Figure 1: 4 Questions To Ask When Repurposing Capacity to Fight the Coronavirus



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In an unprecedented time of need, some of the biggest brands in industry have raised their hands and stepped forward to battle against the dwindling medical supplies to prevent and treat COVID-19. They are elevating their manufacturing and wider supply chain capabilities to provide alternative sources of supply for ventilators, masks, gloves and other PPE for medical professionals, patients and consumers.

More broadly, the actions reflect how innovative manufacturers are pivoting to leverage core competencies and fulfill skyrocketing demand at levels of agility never seen before. For example:

- AB InBev is using materials from its offerings to create disinfectant. It is then leveraging its global network of sites and partners across continents to create and package over 1 million units of disinfectant or hand gel for hospitals and other medical professionals. ¹
- GAP has announced plans to shift capacity from producing designs for its various brands to manufacture masks and gowns and other PPE for hospital workers. ²
- Dyson seeks to leverage its strengths in air power and small-engine production — and innovation speed — to transfer its design of a new ventilator into commercial production. This new product, which is currently being approved by the U.K. government, would be produced using existing production processes and inventory. It has pledged to make 15,000 units. ³

These actions and many more are inspiring companies to take action and ask these questions:

Do We Have the Core Competencies and Existing Capabilities to Match Current Needs?

“We say we’re a protective company ... Then why aren’t we starting to (make) protection for our doctors, nurses, hospitals and their needs?”

– Dan Bourgeois, CEO of Bauer

Bauer, a Canadian company known for its ice hockey equipment, is adjusting its production methods at its sites in Blainville, Quebec and Liverpool, New York, to produce safety equipment for hospital workers. ⁴

Whether it’s a specialist organization or a brand within a large multinational conglomerate, the current successes come from organizations leveraging their core competencies across production lines, logistics, supply bases and know-how. Manufacturers that seek to apply their skills and competencies to a different set of problems, compared to business as usual operations, must also consider the following:

- **Do we have access to labor and capacity?** For companies that struggle to have their workers come to their sites, and must balance shift crews, capacity and output, might still require staggered shifts. Quickly training and upskilling associates also needs focus. Different product designs or production techniques will result in different maintenance tasks, changeovers and quality requirements.
- **Can our network support the shift?** Not all sites will be able to participate, either due to available labor, logistics purposes, supplier capabilities, or because the capacity is already dedicated to producing other products in demand. Also, retrofitting and installing new production capacities is time-consuming – even with virtual commissioning. HanesBrands and Fiat Chrysler Automobiles (FCA) are each retrofitting and installing new production capacities to make masks and other PPE. Until some of its sites are ready, HanesBrands will shift production to sites in Central America. ⁵

What Inventory Can We Use – and Can We Get More?

Examine the inventory of raw materials and intermediates that is on hand for products that are not being manufactured during this time. Is there a way to put it to a different use? Some beverage companies are either donating raw materials for – or producing – hand sanitizer on their own. Beauty and cosmetics providers are repurposing their bottling lines to package hand sanitizer. LVMH has shifted plants from making Dior and Givenchy to produce hand sanitizer for hospitals in Paris. It already had key sanitizer ingredients ethyl alcohol, purified water and glycerin on hand. ⁶

How Do We Share Resources?

Rather than completely idle capacity and the supporting workforces, manufacturers are pursuing new relationships that leverage different combinations of available capacity, workforces and knowledge to produce needed products.

Test the sharing options by asking the following:

- **Can we partner to combine existing product components?** Ford Motor Company and 3M are partnering to combine the inventory of compact blower motors from different Ford factories with 3M filters for portable respirators. ⁷ Ford has also started a knowledge transfer initiative with GE Healthcare that is already doubling its capacity to produce ventilators. ⁸
- **How can we enable an ecosystem?** Brand owners recognize the opportunity to be a part of a broader solution rather than delivering the whole solution themselves. Some are partnering with – or helping enable – new industry ecosystems altogether. Yarn producer Parkdale Mills is at the front of the National Council of Textile Organizations' plan to use designs and patterns from HanesBrands to produce 5 million to 6 million protective masks per week. HanesBrands alone has pledged to produce 1.5 million masks per week. ² Elsewhere, other apparel producers have announced retasking armies of sewing machines from making high-end products to stitching together masks for hospitals in Europe.

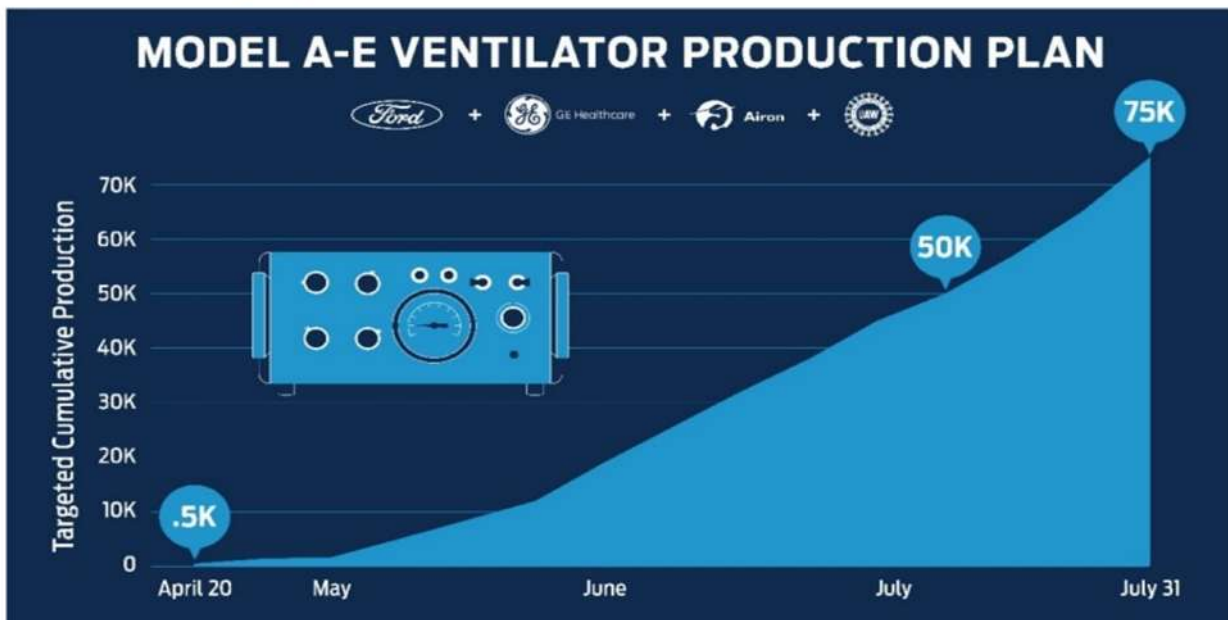
How Do We Balance Speed With Compliance?

All shifts in production – and eventually the supply chains in and around the factories – are focused on accelerating the design and production of various products needed for hospitals, ambulance drivers and patients. This does not mean that regulatory oversight for product safety will let up. Whether it is individual companies creatively using their strengths and inventory or new ecosystems, such as Ventilator Challenge U.K. initiative that ties together multiple companies from different industries – Airbus, McLaren Group, Microsoft, and Unilever with the objective of producing ventilators – regulatory approvals will still be required.⁹ Product approvals and process validation might be time-consuming and scrutinized efforts, but are necessitated for safety. Also, unprecedented times require new approaches and proactively reaching out to regulators to collaboratively identify new methods to ensure safe and effective products.

It is equally important to be realistic when setting goals to scale production. Ford and GE Healthcare are leveraging a U.S. Food and Drug Administration (FDA)-cleared ventilator design from Airon Corporation. There is an expectation of 50,000 units produced by 4 July 2020. Meshing production know-how, engineering capabilities, regulatory savvy and ensuring stable and reliable production processes takes time. Figure 2 illustrates how projected volumes will start small with a goal of 1,500 units by the end of April with a significant ramp up and output to follow.¹⁰

Figure 2: Ford Motor Company and GE Healthcare Ventilator Production Plan

Ford Motor Company and GE Healthcare Ventilator Production Plan



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Ford Motor Company, from “Ford to Produce 50,000 Ventilators in Michigan in Next 100 Days; Partnering With GE Healthcare Will Help Coronavirus Patients”

Recommendations

On one hand, there is a “race against time,” but on the other, is the need to ensure efficiency and continuity not just within sites but in the supply chain as well. Supply chain leaders responsible for manufacturing operations strategy and performance seeking to repurpose their production must do the following:

- Justify your preparedness by asking if you have the core competencies and existing capabilities to match current market needs.
- Break down what can be manufactured by assessing what inventory can be used now and if your suppliers can help provide more.
- Assess your collaboration competency by examining which resources and what intellectual property (IP) can be shared with other organizations.
- Anticipate tempering enthusiasm and setting realistic expectations for production rates by devising a plan to balance the need for speed with regulatory compliance.

Evidence

¹ [“AB InBev Is Manufacturing Over 1 million Bottles of Hand Sanitizer to Donate to Hospitals and Frontline Workers Around the World,”](#) AB InBev.

² [“Gap, Zara Start Producing Masks and Other Supplies for First Responders,”](#) Today.

³ [“Two-Thirds of Machines to Go to NHS Following Order From U.K. Government,”](#) Financial Times.

⁴ [“Bauer Offers to Make Protective Visors for Frontline Healthcare Workers,”](#) SportsNet.

⁵ [“HanesBrands Retrofitting Factories to Make Surgical Masks,”](#) The Motley Fool.

⁶ [“Companies Retool Operations to Assist in Coronavirus Fight,”](#) The Wall Street Journal.

⁷ [“How Ford Is Using Seat Ventilation Fans to Build Thousands of Respirators,”](#) Road and Track.

⁸ [“Teaming Up: GE Healthcare and Ford Partner to Quickly Manufacture Ventilators for COVID-19 Patients,”](#) GE Reports.

⁹ [“Industrial Consortium Aims to Make 10,000 Ventilators in Weeks,”](#) Production Engineering Solutions.

¹⁰ [“Ford to Produce 50,000 Ventilators in Michigan in Next 100 Days; Partnering With GE Healthcare Will Help Coronavirus Patients,”](#) Ford Media Center.

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This complimentary research is part of Gartner's ongoing coverage of the business impact of the coronavirus (COVID-19).

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