

The Pandemic and Healthcare Innovation: Part 5

REIMAGINING THE POST-COVID SUPPLY CHAIN: OPPORTUNITIES FOR SMALL AND MIDSIZED ENTERPRISES

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In a post-COVID world, supply chains will grow in complexity to reflect a changing global landscape. How can small and medium enterprise compete in a cost-effective manner?

Executive Summary

As companies report quarterly earnings, we're getting a better picture of how COVID-19 has disproportionately impacted small and medium enterprises straining supply chain for medical equipment. As elective surgeries recover to 90% and companies emerge from COVID-19 scenario planning, reviewing supply chain risks should be a priority.

Considering the pandemic and uncertain global forces, North American companies are accelerating strategic options to re-shore and/or utilize OUS western hemisphere manufacturing and supply chain capacity. However, the size of the investments needed will likely limit the scale of such activities, especially for small and medium enterprises.

Today, integrated product development and contract manufacturing firms with a global footprint are well positioned to help business units optimize margin and risk from the individual product up to the portfolio level, allowing teams to regularly review and tune risk and profitability profiles to react to market demands. This new global supply chain will be more flexible, responsive, and build geographic redundancy built in to reflect a more complicated global dynamic while still maintaining cost savings and allowing small and midsize players to leverage a global network.

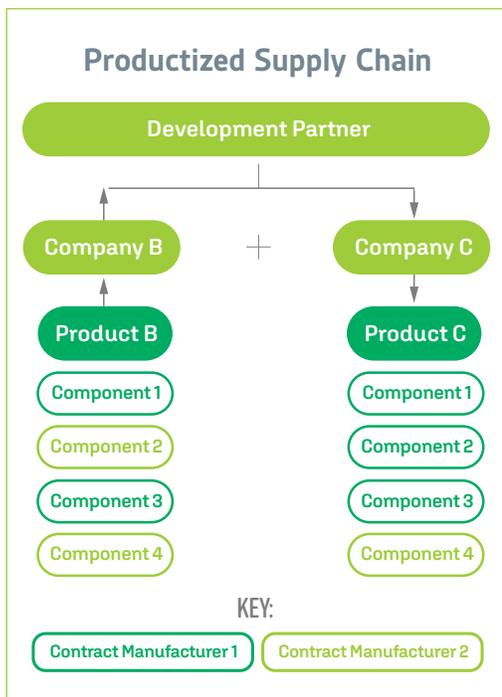
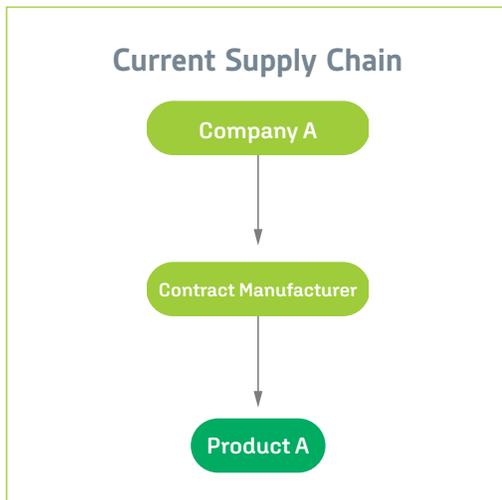
The investment community has given us several examples of productizing a pool of smaller assets in order to access institutional investors (scalability) and increase liquidity (flexibility) and efficiency to a marketplace. Contract research and development firms with a global network of manufacturing resources are uniquely positioned to replicate a similar model.

Background

In the latter half of the 20th century, the world largely marched to the steady beat of globalization as technology and government actions supported rising revenue and lowered costs. Companies expanded aggressively into emerging markets, while leveraging specialized and consolidated supply chains and manufacturing to drive increased margins over the whole product portfolio. The IMF (International Monetary Fund) estimates that almost three-quarters



PRODUCTIZATION OF MEDICAL EQUIPMENT SUPPLY CHAINS



of the increase in trade between 1993 and 2013 was due to the growth of global supply chains. With trade rising fivefold in those 20 years, supply chain improvements helped power global economic expansion.

The need for efficiencies has driven an acceleration of MedTech companies toward expanding relationships with external development and manufacturing partners with the 2019 Johnson & Johnson/Jabil deal reflecting an extreme of this trend. Realized and expected improvement in corporate earnings from leveraging operational efficiency has led to a reduced appetite to make substantial changes to existing supply chain.

In 2020, changes in the global trade landscape accelerated with increased geopolitical uncertainty with the COVID-19 pandemic forcing companies and governments to reconsider the risks and rewards of a globalized supply chain. Nations and nation-blocs are increasingly returning to and prioritizing their own regions and citizens thus leveraging manufacturing capability as a strategic resource. For example, Japan has set aside ¥243bn of its record ¥108tn rescue package to help Japanese companies pull their operations out of China. Larry Kudlow, Economic Policy Chief to U.S. President, Donald J. Trump, has hinted at similar anti-China measures for American companies. (Financial Times)

With increased uncertainty on multiple fronts, businesses are seeking to increase short- to medium-term flexibility and visibility into their supply chain while continuing to deliver operational leverage in their organization. To achieve this, we propose a new model of supply chain management that builds upon the unique MedTech product development and manufacturing environment, a shifting global regulation and taxation landscape, and the desire for redundancy and geographically co-locating manufacturing with customers. The challenge for small and medium enterprises will be to deliver the flexibility without impacting profitability.

As the global political landscape becomes increasingly complex and unpredictable, few small and midsize medical device manufacturing companies have the resources, willingness, or investment appetite to de-risk their own supply chain across multiple geographies at scale. However, economies of scale and vertical integration comes at the cost of flexibility and the ability to quickly react to the next crisis or government action.

Medical-device-focused product development firms with a global network and a core competency in program management can play a unique and emerging role in supply chain innovation. These firms bring valuable external expertise with networks and relationships developed over decades and across continents, critical firewalled capabilities, and scalable and proven quality systems that link a product concept to a world of manufacturing capacity.

In one scenario, the development company signs development and manufacturing contracts with a few MedTech companies, all with a unique portfolio of products.



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Leveraging wide industry expertise, the development company analyzes different portfolios to identify functionally similar, low complexity, non-differentiated components where opportunities of scale outweigh the development costs. The redesigned component is then produced by a contract manufacturer at a higher volume and lower costs before assembled into products within different portfolios. At a threshold scale where increased volumes offer diminishing cost savings, the development company manages the expansion of manufacturing across geographies to further de-risk the supply chain. These activities are managed under the development company's quality system and regularly updated to clients.

By aggregating components from different products into separate manufacturing “buckets,” even small and medium sized enterprises can benefit from economies of scale. Meanwhile, extra capacity is built to take advantage of local regulation or to comply with import/export laws. Startup costs are spread among many clients and does not meaningfully impact margins.

Product development firms are ideal operators of these portfolios. They have strong firewalls in place to protect intellectual property, experienced designers and engineers to reduce the complexity of the components, and proven quality systems that are implemented within their third-party manufacturers.

In a hypothetical example, a midsized medical device manufacturer (Company A) has a well-regarded implant on the market and a product line of surgical tools that's available in a limited number of sizes and materials to accommodate patient physiology and surgeon preference. However, even though the implant is technically superior to the market incumbent and market leader (Company B), it hasn't been able to gain meaningful market share beyond early adopters.

In this scenario, the market leader (Company B) has strategically invested in a more extensive catalog of surgical tools and hospital administration has mandated that in order to reduce administrative overhead, they will only carry implants with a catalog that matches or exceeds the market leader.

Like many other companies, our hypothetical midsized medical device company (A) is struggling under the weight of COVID-19 impact on supply chain and is seeking strategies to:

1. Improve their already innovative product with a customer centered approach
2. De-risk/diversify their supply chain from effects of COVID-19 and emerging geopolitical divides
3. Expand their catalog into lower volume size/materials
4. Maintain or improve gross profit margins



In this case, our MedTech (Company A) identifies a dedicated product development partner with broad industry recognition, deep experience managing complex supply chains, as well as extensive relationships with CMOs around the world to provide an innovative solution.

The product development firm identifies and partners with contract manufacturing companies whose products have similar components, processes, and/or materials. The product development firm set up strict internal processes to de-identify product associations, applies minor design changes that maintain regulatory compliance, and generate new supply chains at a higher volume by aggregating components and/or processes of different products.

Additional benefits are generated when aggregated volumes reach a certain threshold (from multiple products or the entrance of a larger player). The product development firm leverages the increased volume to diversify the supply chain to different CMOs around the world closer to the respective sales market regions (of Company A). In case of future pandemics, tariffs, or other impacts to the supply chain, the midsize manufacturer (company A) is protected from one region's hot spot effect.

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