

Celebrate the Best and Fix the Rest

An exchange of perspectives on supply chain challenges between Sebastian Moritz (supply chain expert and principal at the economic consultancy TWS Partners of London) and Darren Verlenden (Head of Process Solutions at Merck).

COVID-19 tested biopharma. There were successes and challenges. As an industry, what did we learn? What did we do right? What must change?

Moritz: We saw a phenomenal response to COVID-19. It was the biggest vaccination campaign in history. The industry supported a massive ramp up. COVID-19 was great proof of the industry's capabilities and dedication, but it also exposed a need to reshape the future of biopharma.

Verlenden: We saw incredible collaboration and increased transparency across the industry. Companies that might not typically work together banded together for the greater good; for example, large biopharma originators working with CDMOs, integrators and technology partners to increase capacity. We worked closely with government agencies and saw a greater level of transparency from our customers. This collaborative approach broke down barriers and enabled us to drive critical prioritization to serve our customers, and ultimately, patients across the world.

Moritz: The public sector helped remove impediments to a holistic end-to-end initiative – spanning R&D, clinical trials, production, cold-chain distribution and mass administration. Ample, almost unlimited, funding was helpful. There were, of course, disruptions to

supply chain resources, capacity, infrastructure and offtake. We must handle these better in future emergencies.

Verlenden: COVID-19 challenged our industry in unprecedented ways. But with great challenge comes great opportunity. I witnessed incredible tenacity from colleagues who showed commitment to our customers in the face of unimaginable adversities. There are many examples – from our frontline workers in our China manufacturing facilities who volunteered to sleep at our plant to keep our operations up and running, to our technical and quality teams equipping our global sites with smart glasses to enable virtual customer audits, technical support and training. Throughout the pandemic, we redeployed R&D efforts to assist in our manufacturing output and made R&D an essential workforce.

Are there lessons we can learn about a supply chain under such extreme stress?

Moritz: The most critical lesson is the importance of aligned interests and incentives for all players. It doesn't matter which industry, responsiveness is severely hampered if each player at every stage of the supply chain only acts when the next contract with their customer is signed, or an accurate volume forecast is available.



Sebastian Moritz

Verlenden: COVID-19 exposed the vulnerability of supply chain and distribution networks, whether it be due to tariffs, lockdowns, or a lack of capacity in major shipping ports. To mitigate these supply disruptions, it is critical to have a robust and geographically diverse supply chain. COVID-19 also taught us the importance of having a strong prioritization plan to serve critical needs. Transparency (both good and bad) between customers and suppliers is also key. While there will be challenges, it's critical to have open communication so that actions can be put in place to mitigate them, and realistic outcomes can be established.

Moritz: The good question to ask today, in the aftermath, is how a single entrepreneur in charge of the entire supply chain might view the challenge of expanding biopharma's capacity and capabilities globally. Such a person would look at the bottlenecks at different levels of the supply chain and roadblocks to collaboration and how to address them.

What can biopharma consider by looking into the experiences of other industries?

Moritz: It's very case specific. Automotive and aerospace can provide examples of where it is necessary, for example, to provide longer-term commitments and visibility in the supply chain. Aerospace has extremely long lead times and its supply relationships reflect this. The automotive industry found it necessary to step in to support its component suppliers by entering into direct negotiations with the semiconductor industry.

Verlenden: Use of digitalization to speed up processes and gain better transparency was a transformation in many industries. Biopharma has begun to make these adjustments, as well. For example, there are services available for supply chain mapping across raw materials to help monitor and predict potential disruptions.

Moritz: While this trend is not specific to biopharma, new technologies make it possible to better monitor complex supply chains – even in real time. You know at any point in time which feedstocks have been produced, where they are, and whether a problem has occurred somewhere in the chain. This allows for faster and more targeted interventions. But only if you have accurate, relevant data, which requires incentives for all to share what they know.

What are drivers of digitally transformative trends in biopharma supply resilience?

Verlenden: Even before the pandemic, the biopharma market trends were evolving from new modalities to cost pressures and speed in new plant deployments. Some of the key business drivers of digital transformation trends are increased production speed, quality robustness, agility, and manufacturing cost reduction. These can result in more efficient, resilient, flexible, and intensified manufacturing to help enable the facility of the future.

Moritz: Most advanced analytics provide users with a rear-view mirror plus can generate predictive models. This is potentially powerful in supplying pharma. Again, the main issue for players in biopharma will be addressing incentives. Not every player has an incentive to share information in a way that would ultimately benefit everyone in the industry.

Verlenden: For the products that we supply to the market, we work with our partners to reshape standards for electronic data exchange between suppliers and customers to streamline processes, improve manufacturing forecasts, and improve the reliability of supply.

Can individual companies solve these big challenges in the supply chain?

Moritz: Not when acting alone. The resources a single player would expend to solve the problem are so enormous that the cost-benefit ratio would discourage the player from doing it at all. A challenge is creating benefits for each player in a holistic optimization of the supply chain. That is how the industry can be ready for the next pandemic and be able to support the next generation of treatments in clinical trials.



Darren Verlenden

“From an economic perspective, it will be crucial that the contributions from each player are proportionate to the benefits they receive – otherwise they’ll stay out of it.”

Verlenden: Due to the interdependencies that exist, it will take the entire ecosystem to drive change. But individual companies can start asking the right questions. The pandemic brought out the best in a lot of organizations at the same time it exposed deficiencies. Defining new standards and driving innovation together is the way ahead. During the pandemic, companies joined forces to develop, manufacture and distribute vaccines with great success. There is a lot of good to come from future collaboration.

To what extent are players in the industry prepared to improve sharing of data?

Moritz: Everyone recognizes the benefit of it, no doubt. But, in the worst case, everyone is just waiting for others to solve the problem. It therefore requires leadership, and a cross-industry initiative to rethink the collaboration framework. From an economic perspective, it will be crucial that the contributions from each player are proportionate to the benefits they receive – otherwise they’ll stay out of it.

Verlenden: We are working with customers in piloting eData exchange. There are also established industry consortiums that are working collectively to help align and connect the right individuals toward driving some of these holistic outcomes. Leaders are stepping up. Consensus is emerging, but this is an undertaking we need to tackle together.

Is the BioPharma manufacturing base expanding fast enough to meet needs in the coming decades?

Verlenden: In order to meet future needs, geographic diversity of

supply chain networks will be crucial. We have bolstered our supply by increasing our global capacity and capabilities through capital deployment and regionalization to support the growing demand for life-saving and life-enhancing therapies.

Moritz: A big trend is more local production of vaccines and drugs. The industry has painfully experienced how challenging it can be to secure local capacities and capabilities. If biopharma tries to solve this issue in each and every country individually, we require enormous efforts. Also, here other industries hint at potential solutions like global and scalable manufacturing solutions.

What makes you excited about the future of biopharma?

Verlenden: This industry continues to reach new milestones that were previously considered unachievable, and the latest COVID-19 dynamic is an excellent example. But as pioneers in the industry continue to reshape modern medicine and transform the path from treatments to cures to help serve patients around the globe – that’s what makes me most excited.

Moritz: As a game theorist, I always say, “If you can’t win the game, change the game.” The pandemic has shown that the old way of working in the biopharma supply chain does not work anymore, and the COVID-induced “whatever it takes” approach is probably not sustainable. Therefore, we have the unique opportunity to rethink an entire industry – what could be more exciting than that?

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ABOUT OUR CONVERSATIONALISTS

Darren Verlenden is the Head of Process Solutions Merck. He has 28 years of experience with multifunctional roles in pharma and biopharma. Darren joined Merck in 2010 and has served in roles of increasing diversity, complexity and responsibility in the process development and commercial areas. Verlenden is obsessed with creating customer value, and he is passionate about improving the way biopharma delivers value to its patients through product and digital technologies.

Sebastian Moritz is a supply chain expert and managing partner at the economic consultancy TWS Partners. After studying applied game theory, Moritz obtained his PhD in supply chain management on the topic of supplier selection in high-risk scenarios. With offices in Munich, Berlin, London and Utrecht, TWS Partners is the only global company focused on applying the Nobel Prize-winning field of game theory to improve business performance.

