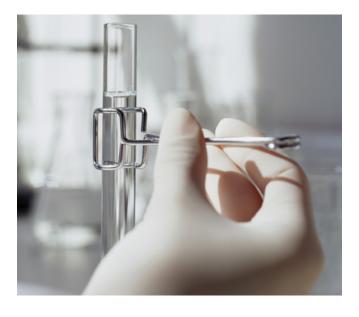


The future of life sciences supply chains is now. After experiencing a once-in-a-generation global pandemic and maneuvering through unprecedented uncertainty, the people and organizations that drive supply chains will never be the same. The idea of going "back to the way we were" is a fallacy. That's not bad news; it's great news.

As life sciences organizations emerge from two years of constant firefighting, a stronger and highly flexible supply chain is needed now more than ever; and succeeding in this new normal will require a smarter and more resilient workforce.

In a way, supply chain leaders of today have been given a gift. The lessons endured during the years of the COVID-19 pandemic have yielded assets and strengths that will influence and enable the future of supply chain. Life sciences supply chains are no longer an afterthought and are, instead, at the center of the C-suite growth agenda.



In our "Future of Life Sciences Supply Chain" series, we will examine five key topics that are top of mind for all life sciences leaders:

- The connected supply chain:
 Reimagining the life sciences supply chain as a dynamic, interconnected healthcare ecosystem to enable a more personalized
- customer and patient experience.
 The M&A transaction landscape:
 Considering the impact of future acquisition integration or separation

activity on life sciences supply chains.

- Deglobalization in life sciences:
 Embracing deglobalization strategies to strengthen supply chains will require re-evaluating the supply chain and manufacturing footprint, diversifying the supplier base, and bringing production bases closer to sources of demand to bolster resilience and limit disruption risks affecting all regions simultaneously.
- Architecting patient-centric supply chain strategies and capabilities to deliver the right drug therapy and services to the right patient, at the right time (and place), and at the right price point.
- Making sustainable supply chains real:
 Linking supply chain functions to ESG
 imperatives, considering the regulatory
 landscape, funding required, and the talent
 required to ultimately enable a purposedriven and sustainable supply chain.

Second series – The M&A transaction landscape

Mergers and acquisitions (M&A) and divestitures continue to be active in the life sciences industry. Across a broad range of deal types—from acquisition or collaboration on clinical-stage assets, to large mergers of global organizations, to carve-outs of complete business—most types of deals, regardless of size, represent significant change for the supply chain organization.

At KPMG LLP (KPMG), our outlook on deal activity in life sciences forecasts that the volume of transactions will increase this year, but the value per deal will decrease. Today, a significant number of well-established life sciences companies are facing a larger than ever "patent cliff," with more than \$200 billion in annual revenue at risk through 2030. Many of the brand names losing market exclusivity are biologic products like Merck's top oncology therapy Keytruda and AbbVie's Humira, which will face fierce competition from biosimilar drugmakers. But, unlike generics, these types of biologics may not be as easily exchangeable. This will require life sciences organizations to replenish their pipelines to fill the potential growth gap from the patents set to expire by 2030.1

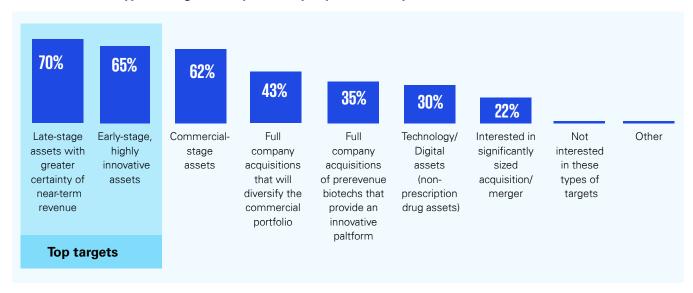
Additionally, competition is strong for high-value targets, such as cell and gene therapies, new modalities, and biotech/high-tech intersections. Pricing pressure for these high-value targets will increase the importance of the supply chain and operations synergies between merging assets. We also expect to see an increase in collaborations and partnerships, which will again challenge the supply chain to be able to collaborate with each new partner in a unique way.

Types of deals

Seventy percent of deals are predicted to involve the purchase of late-stage assets, according to the 2023 KPMG healthcare and life sciences investment outlook survey.² (Exhibit 1) When assets are acquired in Phase 3 of the drug development approval process, preparations for launch are already well underway. That means that acquiring organizations need to move quickly once the deal is approved to ensure launch isn't hindered and deal value can be realized. Beginning the launch planning work during due diligence is imperative to move into execution on Day 1.

Exhibit 1: Late-stage assets and innovative early-stage assets are top biopharma targets

Q: In 2023, what type of targets will your company look to acquire?



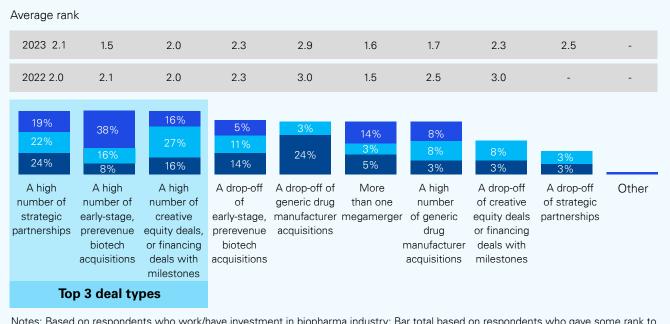
Unique partnerships are also becoming more prevalent. Larger multinationals are funding smaller start-ups, using their size and scale to support start-ups' clinical assets as they move through approval Phases 2 and 3 in preparation for launch. (Exhibit 2) Supply chain organizations will have to design processes, governance, and new ways of working as part of these creative deal structures.

¹ Evaluate Pharma, WORLD PREVIEW 2022 Outlook to 2028: Patents and Pricing

 $^{^{2}}$ 2023 healthcare and life sciences investment outlook survey, KPMG LLP

Exhibit 2: Strategic partnerships and biotech acquisitions will be a chief focus

Q: What types of pharmaceutical deals do you believe 2023 will be characterized by? (Rank top 3 in order)



Notes: Based on respondents who work/have investment in biopharma industry; Bar total based on respondents who gave some rank to the given deal

Source: 2023 KPMG HCLS Investment Survey

Considerations for supply chains integrating or separating assets

Given these trends, it's time to put more focus on the role that supply chains play in the successful integration or separation of a company or asset. Supply chains will need to make transaction execution a competency within the function. Although every deal is unique, the following are strategies that supply chains can use to support transaction success:

Deliberate speed – Define the integration strategy early in planning, as directional changes can be expensive and risky. In other words, failing to plan and take an integration or separation approach that maximizes synergies could lead to higher costs and wasted economies of scale. Although, in some cases, the integration process will be guick and allow a seamless transition to day-today business, it is more likely that organizations will have to prepare for a longer-term process. Even with a stand-alone strategy, there are integration points and a much-needed definition of what "stand-alone" means. Clinical-stage assets acquired from smaller organizations may not come with the structured and rigorous processes to which a large multinational is accustomed. More often than not, the sell-side organization believes that they will receive help from the buy-side organization. Whether or not this comes to fruition, it is important to be deliberate about setting the strategy, planning the integration/separation, and documenting and communicating the plan—then executing at the appropriate speed.

Buy and launch - With more late-stage assets being acquired, buy-side organizations need to improve launch processes, capabilities, measures, and

governance. The stand-alone buying approach may be difficult to implement because although smaller organizations don't have the structure and workforce that larger organizations have, they can be more agile. Organizations need to develop the right capabilities within the supply chain organization to plug in quickly and drive launch processes for new assets and do it in the most cost optimal way possible. Having the playbooks, processes, tools, and systems that drive these critical commercial launch processes goes a long way, since it is unlikely that the same human resources will be available from launch to launch.

multinationals are buying up small novel assets and companies, resulting in the need to run multiple supply chains simultaneously. This is particularly the case in the cell and gene therapy space. The challenge here is that the new asset's supply chain is different from the pharmaceutical or biotech's supply chain and must be managed as unique. Most multinationals forecast the appropriate timing for producing biologic or pharmaceutical products and hold onto inventory for large-volume items. In contrast, most cell and gene therapies are small-volume, high-value products, which require special handling and "just-in-time" or "maketo-order" supply chain and manufacturing approaches. This demands unique processes, systems, people, metrics, and governance to run properly.

Segment the supply chains - Large

Rent the supply chain – The investor profile is evolving and expanding for many assets. Strategic and private equity firms are making major investments in promising companies and assets, and they need to take into consideration how potential targets' supply chains are managed. For example, supply chains can be an outsourced part of the business, and plug-and-play supply chain capabilities are on the rise. These models offer novel ways to support the growth of the business without increasing cost, complexity, and headcount. On the flip side, for sellers, supply chains may need to have longer-term post-transaction contracts and agreements in place. Entities may be asked to continue managing the supply chain and operations of an asset well beyond the transaction close date, maybe even for the life of the product.

Detach quickly – Sell-side supply chains have important considerations as well. More and more, large multinational organizations are looking to adjust their portfolios to align with their corporate strategies. For years, organizations have found ways to consolidate, streamline, and standardize their supply chains. This leads to a high degree of entanglement, making the cost and complexity of a transaction greater. The degree to which digital capabilities and information technology systems have already been consolidated can be important signals in determining whether an organization is ready for a carve-out or divestiture. Organizations like to keep the focus on "remain co," rather than putting all the energy into the part of the business that is being sold. In order to do this, they need to move quickly to identify the people, processes, and systems that are entangled and

make decisions on how to best carve out the asset or business that has been sold. Transaction services agreements have been the norm for many years. Larger organizations that are active in deal activity have found ways to reduce these agreements by leveraging "bridge" capabilities that operate the carved-out organization for a period of time while they are integrated into the buyers' organization.

How to get started

As transactions are a constant in the life sciences industry, supply chains must always be prepared. To increase readiness, there are several actions that can be taken:

- Review the supply chain operating model and the organization's ability to adapt rapidly to additions or subtractions from the business. The strength of the operating model for collaborative business relationships will need to be evaluated as well.
- Evaluate the transaction playbooks, refresh and refine the processes, and develop transaction archetypes and strategies for each; educate organizational leaders to be ready to execute a transaction.
- Develop an execution strategy that aligns with the deal hypothesis, as well as the supply chain strategy for the archetype. The resulting strategic direction becomes the basis for the functional charters that are developed in the planning phase.
- Deliberately assign roles and responsibilities to ensure that a supply chain executive is part of business/corporate development activities. This shouldn't be an afterthought; when a deal moves through due diligence. the supply chain and operations organizations must be part of clinical and commercial conversations.
- Establish a model that allows a transaction partner to ramp up quickly to support due diligence, planning, and transaction execution. Remember that, for most organizations, transactions happen infrequently and may not require full-time support every day.

Important lessons for supply chain leaders

At KPMG, we have worked with many life sciences clients on due diligence, transaction planning, and transaction execution. Through that experience, several learnings have come to the fore that improve the transaction process for both buyer and seller:

- **Supply continuity** During any transaction, a supply chain's overarching role is to ensure continuity of supply. Manage the transition process in a manner that assesses risk of supply disruption for every decision made.
- **Defined approach** Each transaction is unique, and experience is the greatest asset that an organization can have. Apply experience when planning and managing a transaction to support the success of the effort.
- Mutual accountability Evaluate the capabilities, skills, and talent at both organizations. The skills needed to execute the transaction can be found on both sides of the buying and selling relationship.
- Operating model focus From plannning to execution, consider the roles that people will play in detail, as well as the processes that will happen during and after the transition, and the enablement systems that will be used. Identifying critical business processes and non-negotiables at the start reduces misunderstandings and confusion, while also informing project plans and timelines.
- **Understand interdependencies** The process of integration or separation doesn't happen in a functional silo. From the beginning of a transaction execution process, consider cross-functional dependencies, noting where assumptions or decisions are being made that could have an impact on another function.
- Identify critical entanglements and long lead-time activities - Review the entangled business processes on the sell side to define the complexities of separating or integrating assets.

Conclusion

Life sciences transactions continue to be active and will increase in complexity as well as speed to close. Supply chain and operations play critical roles in the success of a deal, no matter how big or small. Leaders of supply chain organizations have to balance between the work they do to standardize and consolidate to improve costs and the continued pressure to manage the integration and separation activity of the business. Beyond the internal challenges, the external pressures continue to increase with life sciences supply chains constantly managing both organic and inorganic disruption.



How KPMG can help

KPMG assists businesses in designing and implementing purpose-built supply chains. We are a full-service advisory firm with a broad range of functional and industry experience that can help address your supply chain needs from strategy through execution. Because we anticipate that deal activity is expected to rebound and accelerate across all life sciences industry subsectors, we have been partnering with a number of organizations to refresh and adapt our wide-ranging supply chain transaction products and services around the following needs and priorities:

- Wide-ranging supply chain integration and separation planning and execution
- Wide-ranging supply chain integration and separation playbook development
- Deployment of analytics for cutover and Day 1 readiness inventory decision support
- Postmerger integration and post-carve-out analysis of the supply network and supply chain operating model.

Our solutions

Supply chain strategy and analytics	Supply chain planning	Supply chain execution	Logistics and distribution
 Supply Chain and Manufacturing Transaction Services Digital Supply Chain and Manufacturing Strategy Supply Chain Operating Model Design Complexity Management/Cost to Serve Supply Chain Segmentation Supply Chain Data and Analytics Sustainable Supply Chain (ESG Strategy) 	 Demand and Supply Planning Sales and Operations Planning Integrated Business Planning Cognitive Planning Inventory Planning and Optimization Supply Chain Planning Technology Enablement and Implementaion 	 Order to Cash Optimization Manufacturing Improvement and Factory of the Future (Industry X.0) Product Planning and Control Supply Chain Visibility and Collaboration (i.e., Control Towers) Supply Chain Execution Technolgy Enablement and Implementation 	 Logistics Strategy and Operating Model Network Optimization Transportation and Distribution Management Inventory Optimization and Management Warehouse Management Reverse Logistics L&D Technology Enablement and Implementation



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