Building Flexibility

A new business model for a volatile industry

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In recent years, the life science industry has undergone dramatic change to a far more volatile environment with lower profit margins. The large pharma business model with evergreen possibilities of blockbuster drugs is becoming obsolete. Large life science companies have been merging, acquiring, reducing head count, and closing manufacturing plants as they recalibrate to either a R&D focus or a brand management function. Mid-sized drugmakers face a recalibration challenge, too, especially those with older operations infrastructure and less-developed information technology and automation capabilities. Biopharma companies continue to struggle under the burden of clinical trial and drug approval costs.

What these company types all have in common is a need to reassess the components of their business and then realign or eliminate them, and to create new, more flexible strategies and leaner, more efficient organizations. They are seeking new ways to manage market fluctuations, globalization, more complex supply chains and regulatory issues.

Transitioning to a Streamlined Business Model

The transformed business environment in recent years has taught that the development/ manufacturing/supply-chain operations box (infrastructure, technical, regulatory), which some small and mid-sized drugmakers have built as a result of their business constraints, now hinders their competitiveness. Likewise, but to a lesser extent, startup and virtual biopharma companies that have development and manufacturing deals more than 12 or 18 months old can face similar challenges.

One thing is certain: It takes time to make the adjustments required to transform a restrictive operations box into a strategic asset. As part of the solution, companies are adopting a hybrid business model, relying more heavily on outsourcing to gain the needed technology, expertise and flexibility. They share functions with their service provider, integrating the strengths of each partner.

In some cases, a corporate culture shift will have to precede any operations transformation, where staff members embrace and trust their service providers as much as they do their co-workers. In other cases, particularly for small and virtual biotech companies, it is a simpler matter of redefining the sponsor/service-provider relationship and adjusting strategies.

Working with a contract development and manufacturing organization (CDMO) with expertise in all the services you require ensures greater service uniformity, efficiency and collaboration throughout all processing stages. CDMOs can provide the processes, technology, specialized intelligence and rapid response to changing needs that can give you a competitive edge. They enable sponsors to rapidly scale operations up or down and add specialized capabilities, accommodating flexible scheduling and volume spikes.

To incorporate a CDMO as a strategic asset into your operations, first determine the type of relationship you need and the role you want the provider to play. Are you seeking a long-term strategic partnership? A single-service company that can provide both development and manufacturing expertise in your product area? One that is both a technology and regulatory asset?

Outsourcing Trends

To achieve greater flexibility and efficiency, companies of all sizes have increasingly turned to outsourcing to fulfill their business needs. Unlike past practices, they are outsourcing in a more strategic sense rather than on an as-needed project basis. According to the 2011 Contract Pharma Outsourcing Survey of more than 200 sponsor-side respondents, nearly half (49%) of all industry companies reported that their outsourcing spending grew in the previous year, with 56% describing their outsourcing relationships as strategic, not tactical. And 54% of companies expect their outsourcing spending will grow in the coming year, particularly big pharma (57%), emerging biopharma (69%), top ten biopharma (61%) and generic companies (78%).

Gaining Business Flexibility

CDMOs can play large and small parts in bringing flexibility to drug sponsors. A CDMO may become the big cog in your development and commercialization efforts, involved at various stages as technical experts, joint project overseers, hand-off specialists, supply chain managers, and regulatory and technical advisors. As a strategic partner, the service provider must become an organization in tune with your objectives and integrated with your internal processes.

In another relationship model, you bring in the CDMO at the optimum time, which might be early-phase clinical production, late-stage formulation, manufacturing scale-up, or another stage. In the big picture, however, the greatest benefits come from the multiple linkages of an end-to-end collaboration. Such relationships allow your key scientists and managers to focus on what they do best. This type of collaboration implies something about the length and depth of the relationship. And it recognizes that beyond the technical, regulatory, and specialty expertise of the CDMO is its underlying benefit of significantly less investment in facilities and equipment, and improved flexibility in the use of scarce financial resources.

CDMOs as Technology and Regulatory Assets

Technology is the nexus of many sponsor-CDMO relationships. A reliable development and manufacturing partner can go a long way toward helping you achieve critical business milestones — not just by freeing resources, but by taking the lead on process and regulatory activities, for example. These activities may be fundamental to product advancement yet a distraction to drug sponsors due to competing development

priorities.

One long-standing relationship style between drug sponsors and manufacturing service providers occurs when the latter simply provides labor, equipment and facilities for production capacity. The contractor functions as another set of hands for the sponsor. The sponsor often benefits from cost efficiencies and quicker time to market relative to in-house capabilities.

Among the newer types of relationships are strategic partnerships, based on sharing functions with the outsource partner. In these arrangements, the CDMO is also a link with regulatory bodies and supply chain parties around the world, and can rise to the level of stakeholder.

An ever-growing array of small-molecule drugs and vaccines has been joined by generics, biologics, biosimilars and drug/device/diagnostic combinations. Each new technology represents a threat to an existing way of doing business, driving change not only in processes but also in skills and sometimes in culture. A sponsor can evolve with the technology, of course, but may not have to do it alone. CDMOs are prepared to develop, evaluate, prototype, test, and provide regulatory strategy as well as manufacture.

Another partnering style, most likely used by discovery-oriented small and virtual biotech companies, involves a focus on development, including production of clinical trial supplies and beyond. This partnership lets the sponsor maintain its discovery focus. Sponsor needs will require service provider expertise in a certain technology and likely at various development stages.

Regardless of relationship type, highly qualified contract service providers can help sponsor companies keep pace with the FDA's march toward greater product quality by incorporating Quality by Design principles in drug development and processing. The development process itself is increasingly forcing drug technology expertise to be matched with expertise in process technology, compressing the regulatory development cycle. This is a benefit for sponsors and regulators alike in terms of cost and efficiency.

The technologies used in solving production problems are evolving quickly, adding yet another technical strain on sponsors. But it does make a case for partnering with a technology-savvy service provider that offers all three types of expertise — development, process, and regulatory.

The CDMO Business Premise

A full-service CDMO is a one-stop shop, with specialists available to clients in all facets of drug development, from concept to commercialization. In a sort of Darwinist theory of pharma-evolution, the CDMO evolved from the CMO, still a highly regarded and often-used provider of late-stage development and manufacturing support, and from the drug development portion of contract research organizations (CROs). The result is an entity with academic, scientific and industry process lineage that can operate in both spaces.

The chief benefit of a CDMO is greater project efficiency and continuity through fewer development-step hand-offs, and resulting in seamless transitioning of processes between development and manufacturing. A full-service CDMO gives sponsors — particularly virtual, small and midsize companies — a chance to try out different business models or begin developing a chosen one.

When To Work with a CDMO

If you are entering the development stage with a promising drug compound, you likely face the "in-house versus outsource" question. With in-house development comes greater control of resources. But by working with the right contractor, a sponsor can tap expertise that may not be available in-house, and save time getting to clinical trials.

With in-house development, you establish the capabilities needed when the drug is approved and you scale up to commercial manufacturing. But doing so compounds the complexity of your facility. Equipment costs can be high, validation long, and maintenance and training will be significant ongoing costs.

On the other hand, expertise and infrastructure are two major reasons to use outside services for drug development and manufacturing. A CDMO has a business imperative to maintain the most current equipment, technologies, and scientific and regulatory expertise, often surpassing that of sponsor companies. Service providers must also stay on top of worldwide regulatory requirements for lab activities, submissions, and manufacturing processes across global markets. Life sciences companies must stay current too, but the extent is often limited by the scope of their portfolio and market penetration.

Compare your current strategy to what you could be doing to keep your company growing, and consider whether a CDMO can help. If three or more items on the following checklist are true for your company, it may be time to consider strategic outsourcing:
We are much better in some parts of drug development than others.
We struggle with project hand-offs between discovery and development, and development and manufacturing.
We have little or no infrastructure for producing our drug at Phase II trial volumes.
Our FDA approval is contingent on complex refinements to our development-scale manufacturing processes and CMC preparation.
We have two or more products in differing clinical phases and only have resources for one.
Staff scientists are experts on our compound, but we have limited expertise and resources on the formulation, process development and analytical methods we want to develop.
We are not sure of the regulatory pathway that will lead to FDA approval and launch in the market in the shortest amount of time.
We spend less per year on training per development/ manufacturing employee than we did two years ago.

Effective Strategic Relationship Management

Given the importance of sponsor/service provider relationships in successful outsourcing endeavors, pay particular attention to the maintenance and management of your relationship. Acknowledge contributions,

celebrate milestones, stay informed, and, when necessary, take action quickly.

A successful CDMO relationship requires a clear understanding by both parties of the key objectives and milestones of each process stage, transparent communications, an effective technology transfer, and a caring, collaborative spirit. The collaboration begins with a detailed business plan, including goals, roles, responsibilities and expectations, and a quality agreement explaining the operational rules of engagement. At the outset, team members from each company should meet to discuss the nature and importance of the relationship.

Establish a reporting format that will keep you apprised of the work and the relationship. Ask for frequent check-ins from key staff members initially. Keep the reporting style as informal and unstructured as possible so it doesn't become yet another managerial task. Make sure you are getting the appropriate data and information required to ensure the project is going as intended, that both companies are on track to meet milestone dates, and that plans are being developed and actions taken quickly when the unexpected occurs. Watch out for bureaucratic slowdowns at both organizations.

Despite the best possible planning, the development stage is loaded with unknowns and fraught with potential for surprise. Make sure the source of slowdowns and conflicts are identified and quickly addressed, and the manufacturing technology transfer gets all the attention it warrants and is documented. Especially in projects involving biologics, pay close attention to specification and production-yield anomalies. These can sometimes require a review of the contract to identify financial responsibilities. Get involved early in discrepancies, and make sure data supports the actions you take.

Continue to check in on the project as it progresses, though your need for reports may become less frequent with time. Look beyond manufacturing to the rest of the supply chain. Longer term, conduct periodic product reviews (at least annually), comparing current results with initial expectations and the impact of changes made along the way to help achieve results. Use the review to fine-tune processes and the relationship. In all conflict resolution, it is important that both parties continue to view the relationship as mutually beneficial. Broker negotiations rather than issuing mandates whenever possible.

As the life science industry undergoes significant change, companies are realizing the value of replacing traditional business models with a hybrid model that allows greater flexibility. The new models involve a strategic collaboration with a full-service CDMO that has specialists and services in all the facets of drug development you need, from concept to commercialization. The chief benefits for sponsors are greater efficiency, continuity and flexibility. A successful, long-term collaboration requires a clear plan and responsibilities, complementing each other's strengths and weaknesses, transparent communications, accommodating fluctuating needs, fast response to unexpected issues, and a spirit of trust and confidence. It is a safe bet that the internal cost pressures sponsor companies face now will not end anytime soon. Neither will the opportunities for sponsors and CDMOs to optimize their working relationship.

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