Build CMO Relationships with Effective Management Practices

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Contract service providers offer vital services to bio/pharma companies of all sizes. Establishing an effective working relationship and managing operations are key to avoiding compliance issues.

Bio/pharma companies range from large, well-established pharma or biotech organizations with extended supply chains to virtual companies that focus on research and development while outsourcing all development, manufacturing, and fulfillment operations. Some bio/pharma companies work with a large number of contract manufacturing organizations (CMOs), others with just a few. No matter the size of the company or volume of outsourcing, there are some common ingredients to success.

Two separate areas to consider when developing a strategy that incorporates contract development manufacturing organizations (CDMOs) and CMOs are sourcing CDMO/CMO services and managing CDMO/CMO services.

Five areas are essential in cultivating a strong and successful ecosystem of CDMOs and CMOs: a smart supply chain, communication/collaboration, a strong governance structure, risk management, and data-driven metrics and analytics. These ingredients come with challenges, chief among them is cultivating a quality culture that promotes collaboration and communication—not just internally—but throughout the entire supply chain and with all partners.

The search for the most suitable CMO

Life-sciences companies, more than companies in any other industry, must consider many factors outside of price in the CDMO/CMOs selection process, largely due to the combination of an intense regulatory environment, capability, capacity, availability, and the overwhelming need for a "right first time" process for the development, manufacture, and distribution of a potentially life-saving drug. A sourcing and a due diligence process should include the following components:

- **Capability**: Does the potential CMO have a good history of manufacturing the anticipated dosage form?
- **Quality and compliance**: Has the CMO had any quality or compliance violations over the past 10 years? Contracts with CMOs should state that the CMO will work closely with the contracting organization on regulatory filings, registration, and all quality, compliance, and regulatory issues. A quality agreement

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with the CMO or CDMO should define specific quality parameters and responsibilities and be part of the due diligence process.

- **Capacity**: What volumes are required for the product and can the CMO meet that demand? Does the CMO specialize in the planned product's dosage form, whether it be tablets, capsules, oral suspension, or something else? Specialization is an important consideration, as manufacturers may be held to stricter compliance requirements for different dosage forms.
- **Business fit**: Even if the CMO has passed due diligence on capability, quality, compliance, and capacity, the possibility for failure remains high if the organization is not compatible with the bio/pharma company's quality culture.

Managing CMOs

Life-sciences companies of all shapes and sizes—not just startup bio/pharma companies with limited resources that embrace a virtual manufacturing model that leverages CMOs exclusively—need a strategy for managing CMOs. Large pharma and biotech firms that turn to CMOs for specialized manufacturing of a limited-run or specialty drug, or to manufacture a product that may require specialized equipment or expertise also need a comprehensive oversight strategy.

Communication and collaboration

Operating a full or partial virtual organization with support from CMOs from around the world calls for a strong level of communication and collaboration. A modern strategic approach should not view the supply chain as a strictly unilateral mandate with the bio/pharma company setting the rules and operating for their own benefit exclusively. This type of zero-sum approach that seeks to obtain the greatest benefit for the bio/pharma company alone is often at the expense of the CMOs. A more modern and effective approach sees sourcing and managing CMOs as a win-win approach, rooted in collaboration, where the benefit of all stakeholders is taken into account. This approach provides for a strategic partner that shares your company's values, not a vendor that has a transactional focus.

Effective communication also calls for all parties to avoid data silos, instead establishing a positive flow of data between the CMOs and contracting organizations. The free flow of data will not only simplify regulatory oversight, it will also lead to an improved level of supply chain efficiency and better sourcing decisions. This free flow of information is led by the bio/pharma company's CMO manager, who will lead the communication between the company and its CMOs, as well as internal peer-to-peer departments.

Different bio/pharma company representatives fulfill the role of the CMO manager during various phases of the drug's development and commercialization lifecycle. A technical manager from manufacturing or manufacturing science and technology is typically the first to serve as CMO manager, up through production of Phase III clinical materials. When the drug product that will be manufactured by the CMO is approved for commercial use, this role usually transitions over to a planner/manager in the supply chain department; this new CMO manager will maintain a close working relationship with the technical manager and will team up with them for oversight of the CMO going forward.

Typically, the communications infrastructure will also include an internal manufacturing science and technology specialist who will have expertise about the product and will serve as point for communication while the product is in development. After a year of commercial production, that role is typically transferred to a supply chain manager; finally, there may be a transition to a supply chain director who is responsible for all product planning, and who also coordinates all functional relationships.

The CMO manager keeps the CMOs up to date on any regulatory issues and any upcoming inspections, and makes sure CMOs are adequately prepared. This communication is essential to ensure the CMO sites are always in compliance with all regulatory requirements and agencies.

Reporting and metrics

Communication also implies good reporting; once the technical manager or supply chain planner/manager has established a routine process of managing the CMO, then standard performance reports on the CMO should be reviewed monthly or quarterly. The CMO manager will build the relationships and make sure performance metrics are in place. Metrics including quality, on-time batch deliveries, deviations, and other key performance indicators (KPIs) will be measured to give the CMO manager a comprehensive record of how well each CMO is performing.

A set of standardized reports should be required from each CMO, along with periodic (monthly or quarterly) meetings for reviewing the results and to hold the CMO accountable for any deviations or other non-conforming performances. The standardized reports include metrics on quality, batch performance, and deviations, other KPIs, and adherence to any relevant regulatory issues.

Reporting also includes all supply chain issues, adherence to the production schedule, and statistics for on-time shipments and deliveries, the latter of which may lead to changes in logistics or the selection of an alternate source closer to the company if shipping delays have occurred. Inventory reports should also be part of the reporting system, to guard against excess inventory that may lead to overly high warehousing costs or short-dated products; inventory issues may also affect decisions on frequency of shipments or the optimal batch size. Exceptions for standard inventory levels should be built into the system. For example, a contingency plan for obtaining and warehousing inventory to account for the disruption from a planned shutdown—such as a holiday—and

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an unplanned shutdown—such as a labor disruption or public health emergency—is necessary.

Oversight across the organization

The regulatory, quality, technical operations, supply chain, and finance teams at the bio/pharma company all must be involved to assure proper governance; each group must be aware of the contract terms and conditions and the company's and the CMOs' obligations. The management of CMO activities related to clinical materials, APIs, drug substance, drug product, or packaging/labeling, can be handled by procurement, technical operations, or supply chain managers, depending on the sponsor company's organizational structure.

The most efficient way to establish good governance, while establishing effective communication at the same time, is to set up a single point of contact at the CMO, even if each department has its own secondary points of contact. All questions and answers that go back and forth between the company and its CMO should be documented, with all primary and secondary contacts copied to ensure consistency and transparency in communication.

An annual supply chain planning calendar should map out specific dates, such as each CMO's holidays, shutdowns for vacation or maintenance, or any other anticipated shutdowns or slowdowns. From that point, technical operations, quality assurance, and supply chain managers will schedule annual, quarterly, or monthly site visits to the CMO, depending on the situation. Outside of periodic scheduled visits, when an issue arises, an additional visit may need to be scheduled and the appropriate team members assigned to visit the site to investigate and remedy the problem.

Unexpected issues will arise occasionally regardless of adherence to quality procedures; having risk management protocols in place will help to assess and predict those issues. Predictive analytics may be useful in anticipating these issues and should be an integral part of the risk management process.

Use of a scoring template in each area covered—quality, regulatory, technical operations, supply chain, and finance—will assist in rating CMOs on an annual basis. Those ratings can determine how often site visits are necessary, how well each CMO is performing, where deficiencies may exist, and may also be useful in procurement decisions when it comes time to rebid supply contracts.

A broad rule of thumb is that the top one-third of CMOs deliver the best performance and the bottom one-third need improvement. It falls on the CMO manager first to rank CMOs by performance and with that information make decisions on reallocating contracts so that top performers gain more responsibility. The ranking also can be used to help determine whether lower-performing CMOs should not be renewed, or alternately, whether a plan for improvement should be created to bring them up to par with the rest of the CMO ecosystem.

The virtual company's success and overall performance is directly tied to the CMO's performance, and consequently, proper management of CMOs will lead to a more compliant, successful, and profitable company. **PT**