The Evolution of CDMOs

From the Birth of an Industry to Its Present Significance, and the Challenges It Is Facing

CDMOs (contract development and manufacturing organizations) are a crucial part of the life sciences industry. Some companies and organizations simply don't have the internal resources or expertise to manufacture certain products. So, they turn to CDMOs to produce their latest developments.

Strangely, despite its current prominence, the CDMO industry is a relatively young one. There have been significant developments over its short lifespan, and it is likely that we see even more growth in the years to come. However, as for most industries, there are both opportunities and challenges in paving the way forward.

A Brief History of CDMOs

Although CDMOs have been around for a while, they've only become critical to bio and pharma organizations within the last 20 years. In fact, before 1996, dedicated contract drug-product manufacturers were quite rare. Instead, it was common for major bio & pharma companies to manufacture products for similar businesses — especially if it didn't enable competition. A key turning point was in 1996, when Patheon began purchasing various facilities, while Lonza secured Celltech and cemented its position in contract biologics.

With these acquisitions, Patheon and Lonza alerted other organizations to the opportunity that outsourcing product development and manufacture could provide. In turn, individual CDMOs began popping up and sparked the development of the industry. This was the birth of the CDMO industry as we recognize it today.

A decade later, the financial crisis had mixed effects on the CDMO industry. Several organizations were forced out of business, while some others benefited from investments from private-equity firms. The low-interest investments and long-term prospects were very persuasive in attracting investment, and many were able to purchase production facilities being offloaded by pharmaceutical companies.

Typically, these facilities were obtained for very reasonable prices, and in exchange, exclusive contracts were signed that provided the pharma companies with cheaper production methods.

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The Industry Right Now

Currently, the CDMO industry is in a "melting pot" of change. Recent events like the Covid-19 pandemic and the talent crunch have plunged the industry into another period of change. In response, some organizations feel the need to expand and diversify offerings in order to maintain their market presence.

The Covid pandemic provided a massive boost to the CDMO industry. While biopharma and biologics businesses developed Covid vaccines, there simply wasn't enough internal production capacity available to produce the quantities needed.

CDMOs filled this gap in supply and worked to meet the global demand. If not for the role contract organizations played, the effects of Covid could've been far more severe. In response, the contract industry has cemented itself as a crucial part of the life sciences industry.

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What the Future Holds

With the industry still so young, it's difficult to know exactly how it will change and grow over the coming years. But by analyzing previous trends and how previous global events have impacted the industry, certain developments can be predicted with some accuracy.

CDMOs Becoming PDMOs

Some CDMOs are expanding their services and swapping their "contracts" for "partnerships", evolving the term "CDMO" into "PDMO". By getting closer to their partners, CDMOs can move past some of the pressure, and instead, offer consultative support or innovation to develop products in new ways.

The outsourcing industry has always been quite fast-paced. Moving to this new model allows businesses to be more efficient in bringing new life-saving advanced therapies and drugs to the market.

Private Equity Investment and Development

There is a huge strain on manufacturing capacity and supply to help take some of the new technologies, like cell therapies, to market. Now is a prime time for private equity firms to invest in CDMOs. With pharma organizations selling off facilities and outsourcing production instead, CDMOs with sufficient investment have a prime opportunity to scale up at an exponential rate.

If enough CDMOs manage to source this investment, we will likely see massive growth in the industry over the next several years. We saw something similar happen after the financial crisis of 2008. While some individual companies may not survive, the industry as a whole is likely to expand drastically. In fact, with the CDMO space expected to achieve 10.0% CAGR between 2020–2027 and grow to a nearly $300 billion industry in the next five years, the future is bright.

Pharma Selling Off

Pharma companies continue to sell off their development and manufacturing sites. Producing drugs, medicines, and other medical equipment themselves remains expensive — especially when you consider the cost of running and maintaining the facilities and their staff.

By selling their facilities to CDMOs, Big Pharma is saving money and reinvesting back into the R&D of new products and modalities. Allowing them to maintain a more constant revenue stream and have multiple active projects at any one time.

Meanwhile, the CDMOs can focus their attention on improving their value chain and meeting demand with greater efficiency. The more facilities contract organizations can gain ownership of, the fewer shortages we'll see.

The Talent Crunch

Something else that is influencing the development of the CDMO industry is the talent crunch. With the lessons learned from the pandemic and its effects on the global supply chain, we have seen over $150 billion of investment from private equity and the National Institutes of Health across North America alone — the fastest growth rate for the life sciences industry.

Naturally, with this level of investment comes growth. Growth in client demand, the requirement for resources, materials and, of course, talent. Over the next five years, 98% of life science organizations have set plans to increase their headcount, meaning that talent demand is higher than ever.

The main challenges during the talent crunch will be the attraction and retention of highly qualified employees. It's becoming obvious that to remain competitive amidst the talent crunch, life science businesses will have to keep investing in their team.

For CDMOs, there are a couple of challenges being faced, some old and some new:

- The industry has been known for having tighter budgets for salaries. This is due to the nature of the business being services-driven; however, over recent years, outsourcing businesses have become more competitive in line with large pharma & biotech organizations.
- The CDMO market is exciting but highly fast-paced; contract organizations are managing multiple partnerships simultaneously and having to deliver to a high standard of quality every time.
- With inflation rising in the US and across the globe, companies that are too rigid to adapt quickly to market conditions are struggling to keep up with the pace.

Outsourcing businesses' greatest strengths are also their greatest weakness in talent retention. It comes down to the fact that CDMO employees make very marketable candidates within other industries. They are candidates who are good at working under pressure, are comfortable with being client-facing, and topping it all off, they are usually outstanding, affordable profiles for local large-scale pharma & biotech businesses.

Therefore, given the sheer scale of hiring that has taken place across the market in the last 2-3 years, talent retention has become one of the most complex challenges leaders will face in the coming months.

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