



2022 Pharma Contract Services Industry Outlook

Highlights, Trends & Opportunities

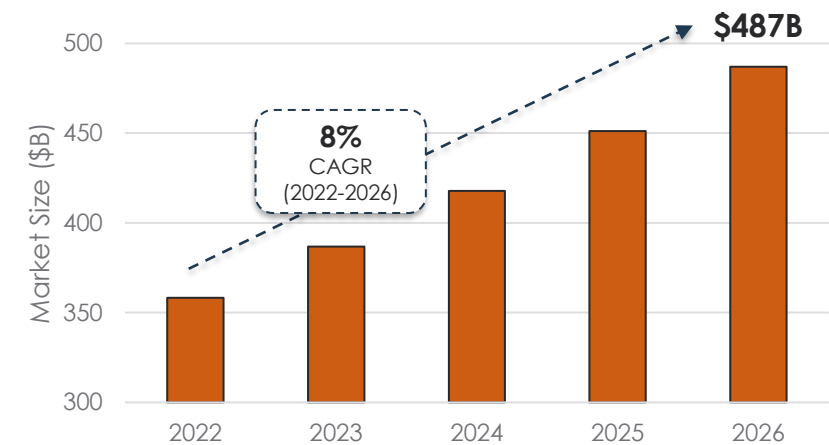
Reach the *Right Outcome*



PHARMA SERVICES SECTOR CONTINUING LONG-TERM GROWTH

CONTRACT SERVICES INDUSTRY | HIGHLIGHTS, TRENDS & OPPORTUNITIES

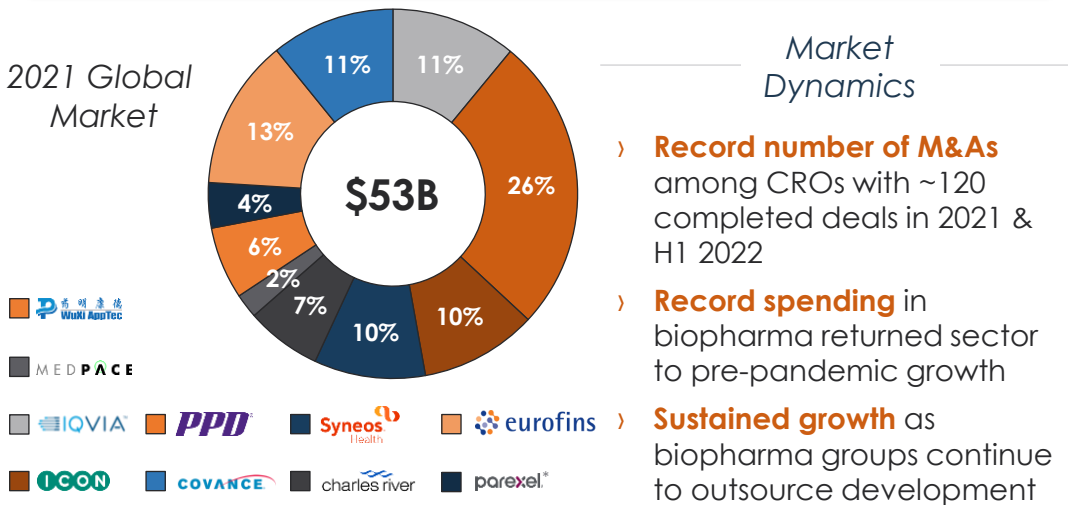
Global Contract Services Market



*CRO, CDMO, and CMO Markets

Select Key Players

CRO Market Dynamics



- #### Market Dynamics
- Record number of M&As among CROs with ~120 completed deals in 2021 & H1 2022
 - Record spending in biopharma returned sector to pre-pandemic growth
 - Sustained growth as biopharma groups continue to outsource development

Market Drivers

Rise in prevalence of chronic disease and public health burden

Growing R&D budgets and number of clinical trials

Waning COVID-19 pandemic renewing trial interest

Robust Demand across CRO, CDMO, & CMO Subsectors Supports Growth for the Pharmaceutical Services Sector

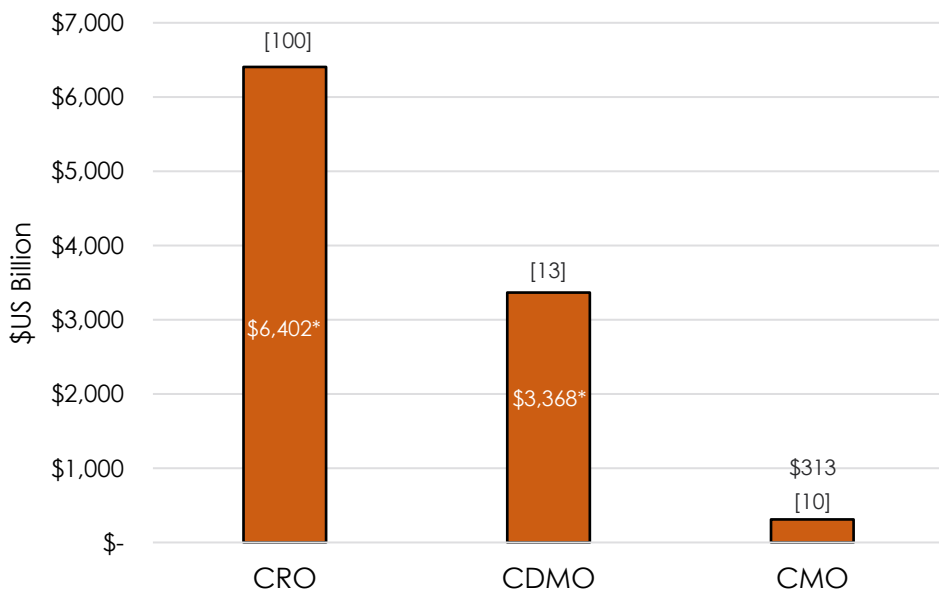
PHARMA SERVICES TRANSACTION DYNAMICS

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Global Pharma Services Market Dynamics

2021-Q2 2022 M&A Activity

Jan. 2021 – June 2022



[x] Total Transactions in sub-segment

*Deal value excludes outlier transactions (see panel on the right)

Insights

Mergers & Acquisitions

- › Total CRO deal value (>\$45B) driven by several large acquisitions:
 - **PPD (\$17.4B)**, **PRA Health Sciences (\$12B)** & **Parexel (\$8.5B)**
 - Average deal value: \$149M
 - Median deal value: \$62M
- › Total CDMO deal value (>\$12B) driven by:
 - **Aldevron (\$9.6B)**
 - Average deal value: \$561M
 - Median deal value: \$715M
- › Market subsectors driven by active strategics & private equity
 - Active roll-up strategy across all segments

Venture Financing

- › Minimal financings across the segment (**\$361.6M total**):
 - Only 8 financings across all pharma services
 - CDMO segment was most attractive segment with 5 transactions
 - **Touchlight (\$125M)** financing is CDMO highlight

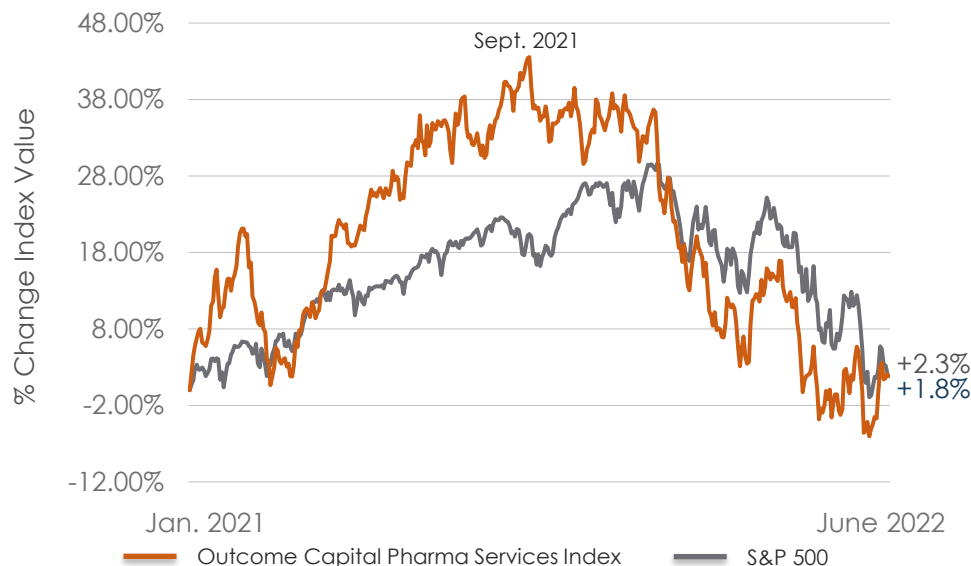
Growing Market Driving Robust M&A Activity, While Financings Remain Limited Across Entire Sector

PHARMA SERVICES SECTOR CONTINUING LONG-TERM GROWTH

CONTRACT SERVICES INDUSTRY | HIGHLIGHTS, TRENDS & OPPORTUNITIES

Global Pharma Services Market Dynamics

2021-Q2 2022 Public Market Performance



Outcome Capital Pharma Services Index



charles river



evotec

MED PACE

IQVIA



WuXi AppTec

UDG
healthcare plc

Catalent

Syneos
Health

inotiv
analyze. answer. advance.









Current Market Dynamics

- › Pharma Services sector has pulled back in line with overall market
 - **High: Sept. 2021 +43.4%**
 - **Low: June 2022 -6.0%**
- › Enterprise values have come back to market but stabilized (average)
 - **Sept 2021: EV/Rev = 6.3x EV/EBITDA = 42.3x**
 - **June 2022: EV/Rev = 3.5x EV/EBITDA = 19.1x**
 - Market demand back to normal, pre-COVID levels
- › Overall market downturn favors larger strategic players
 - Established & stable market presence is comforting for clients
 - Large backlog locks in revenue
 - Diversified offering to capture new opportunities
 - Ability to absorb potential price erosion in marketplace
- › Large strategics will still be active in M&A market
 - Looking to acquire niche markets
 - Relative cost of capital still low
 - Strong & stable balance sheets to support transactions

Large Pharma Service Players Are Healthy & Poised To Increase Market Share

Recent Industry-Defining M&As

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Target	Acquirer	Value	Deal Date	Insight
		\$17.4B	12/8/2021	This acquisition adds the clinical research services of PPD to Thermo Fisher, building a comprehensive portfolio of top tier services across the clinical development spectrum. Value assumes ~\$1.5B PPD debt.
		\$12B	7/1/2021	The acquisition of PRA makes ICON the world's largest CRO powered by healthcare intelligence, while keeping the focus on executing clinical trials from Phase I to post-approval studies.
		\$9.6B	6/17/2021	The acquisition of Alvedron will expand DanaHER's capabilities in the field of genomic medicine, further supporting customers in bringing life-saving therapies and vaccines to market faster.
		\$8.5B	7/2/2021	EQT and Goldman Sachs acquisition is based off the historically strong performance of Parexel and its continued strong growth trajectory, as well as the overall projected growth of the CRO market.

Strategics and Institutional Investors Are Eagerly Entering the Growing Contract Services Market

DISCOVERY STAGE SERVICES

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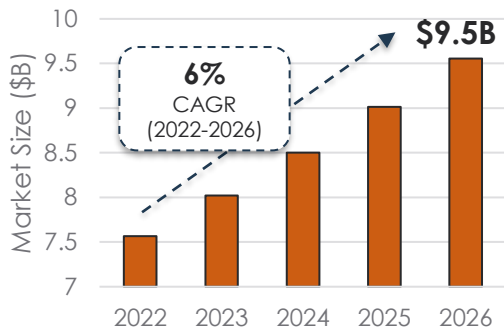
Global Discovery Services Market

2.5%-5%

of screened compounds are advanced to preclinical testing

10 Years

Average time to approval for a new drug



Growth Drivers

Continued investment in global pharmaceutical R&D

Discovery process of biologics is complex and cost-consuming

Increasing adoption of tech-aided discovery & silico techniques

Key Challenges

Limited target data and information on biological cross-network connectivity

Low hit rate and long discovery process

High costs of discovery & validation may hinder growth

Early-Stage Development Services

- › Growing number of CROs focused on **target identification and validation**
- › Personnel expertise & technical capabilities of CRO heighten **efficiency** of the discovery process
- › **Outsourcing early-stage development** enables biopharma groups to allocate time & resources for later stages of development

Select Groups



AI-Based Drug Discovery Platforms

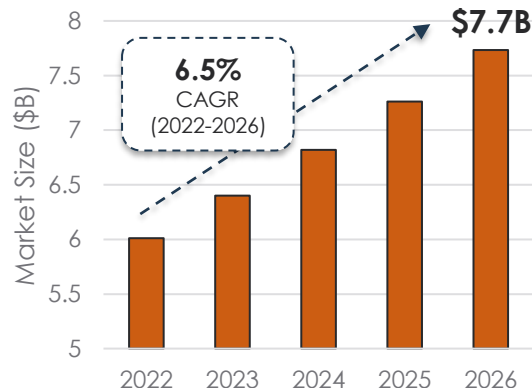
- › Target Selection and Validation
 - More efficient target identification & prioritization using known gene-disease associations
- › Compound Discovery and Formulation
 - Machine learning techniques are reducing the duration of molecule hit discovery by 3 to 5 times
 - Automation of chemical formulation process
- › Drug Repurposing
 - Opportunities identified by in-silico modeling enhancing repurposing efficiency

Burgeoning Biopharma R&D Spending Drives Market Adoption of Early-Stage Development Services

PRE-CLINICAL DEVELOPMENT SERVICES

CONTRACT SERVICES INDUSTRY | HIGHLIGHTS, TRENDS & OPPORTUNITIES

Global Pre-Clinical Services Market



Growth Drivers

- › Growing number of molecules & devices entering development pipeline **sustains growth trajectory**
- › **Cost reduction** due to high cost of in-house pre-clinical development
- › **Risk mitigation** by enabling parties to allocate time & resources to assets in more advanced stages of development

Pre-Clinical Subsector Breakdown

Chemistry, Manufacturing & Control

Ensures product safety, efficacy & effectiveness

Accounts for ~ 50% of pre-clinical development costs

Toxicology

Monitoring of drug tolerability and side effects with in vitro and in vivo models

Accounts for ~ 25% of pre-clinical drug development costs

Bioanalytical Testing

Pharmacological understanding of drug use, mechanism of action & administration method

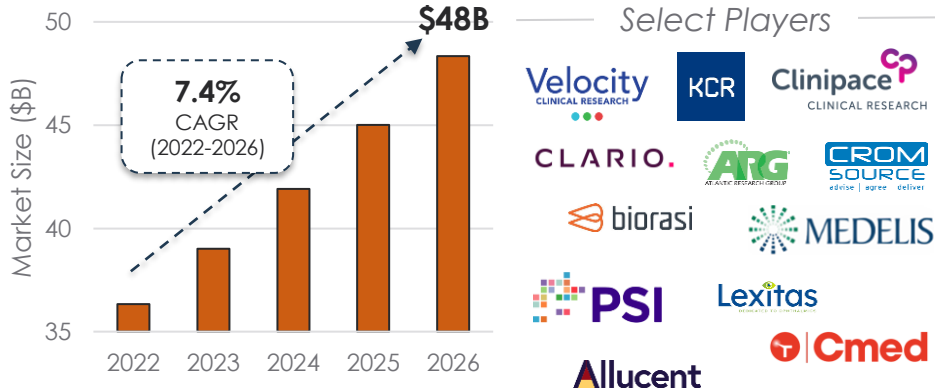
Pharmacokinetic and pharmacodynamic assessment of drug metabolism and bioavailability

Growing Pipelines & High Costs of In-House Research Drives Outsourcing of Pre-Clinical Development

CLINICAL STAGE DEVELOPMENT SERVICES

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Global Clinical Stage CRO Market



Growth Drivers

Growing R&D expenditure and a rising number of clinical trials propel outsourcing of R&D activities

Increasing number of clinical stage services (Phase I through Phase IV) by CROs enables trial efficiency and cost reduction

Success of CROs amid COVID-19 and backlog of clinical trials has strengthened demand for clinical services

Clinical Subsector Breakdown

Patient Recruitment

- › Recruitment of diverse patient groups across all therapeutic areas in multiple geographies
- › Established networks of trial sites for efficient expansion
- › Expertise designing patient-driven trials aimed at patient retention

Trial Management

- › Medical monitoring & clinical data management capabilities
- › Endpoint measurement, biostatistics & statistical programming
- › Regulatory services
 - Safety & Pharmacovigilance

Digital Clinical Trial Solutions

- › AI-driven innovation has the potential to streamline clinical trial design and operations
 - Accelerates recruitment of **diverse and eligible** patient populations
 - Enables real-time monitoring of patient **dosing & behavior**
 - Predictive modeling of **patient responses** to treatment & placebo



Digital Advances Enabling Greater Efficiency & Growing Demand Project Strong Growth of Clinical Stage Services

CRO TRANSACTION DYNAMICS

CONTRACT SERVICES INDUSTRY | HIGHLIGHTS, TRENDS & OPPORTUNITIES

Discovery Stage

- › **Technological competences & discovery know-how** drive demand for services
- › Charles River Laboratories has made **6 acquisitions of discovery-stage CROs** over the last 5 years
- › Recent consolidation by strategics with several acquisitions of **bolt-on discovery services**



Recent Transactions







Target	Acquirer	Amount
 Symeres <small>Making Molecules Matter. Together.</small>	 KEENSIGHT CAPITAL	Undisclosed
 Viroclinics	 Cerba Research	Undisclosed

Pre-Clinical Stage

- › Greater emphasis on **end-to-end development capabilities** including in vitro and in vivo testing
- › **Labcorp/Covance** has made a series of recent acquisitions to bolster its pre-clinical services suite
- › Market entry of **growth investors** through several acquisitions led by **private equity**



Recent Transactions

Target	Acquirer	Amount
 BioAgilytix	 Cinven	>\$3.0B
 Woodland Biosciences	 ICHOR	Undisclosed
 explora biosciences	 charles river	\$295M

Clinical Stage

- › Demand for **digitally-enabled components** to accelerate trials and increase efficiency
- › **Syneos Health & ICON** have made **4+ acquisitions** each to expand their clinical practices
- › Bolt-on of **specialized therapeutic area** clinical practices adds **in-depth expertise** to broader set of services



Recent Transactions

Target	Acquirer	Amount
 Clara	 MB SCIENCES	Undisclosed
 Velocity CLINICAL RESEARCH	 GHO CAPITAL	\$500M
 Clinipace CLINICAL RESEARCH	 dMed 缔脉	\$233.3M

Inorganic Growth Strategy and Growth Investment Propel the CRO Transaction Environment

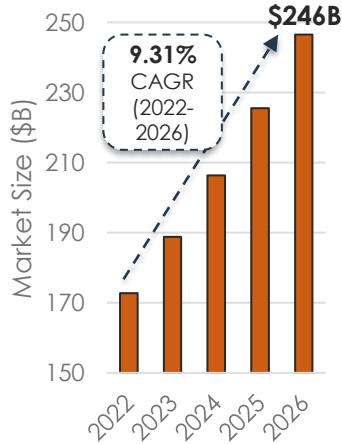
DEVELOPMENT & MANUFACTURING SERVICES

CONTRACT SERVICES INDUSTRY | HIGHLIGHTS, TRENDS & OPPORTUNITIES

Global CDMO and CMO Markets

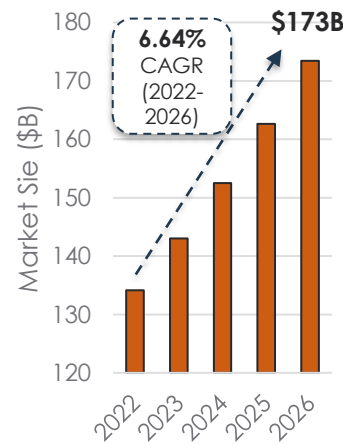
CDMO Market

- Industry-wide demand to **compress development timelines**
- Growth of **large molecule market share** adds complexity to manufacturing
- Increasing demand for **medical device design** services



CMO Market

- Rising demand for **small & large molecule** therapeutics
- Growing need for **advanced process & production** technologies
- Increased competition & decreased profit margins drive **outsourcing of manufacturing**





Select Key Players



Transaction Dynamics

- Consolidation to enhance profitability through geographic expansion and market penetration
- Demand for large molecule (i.e., biologics & cell/gene therapy) development & manufacturing drives transaction values
- Commercial success of CDMO & CMO amidst COVID-19 has garnered interest of strategics and investors

Recent Transactions

Target	Acquirer	Amount
 COGNATE BIOSERVICES	 charles river	\$875M
 Exelead Complex Drug Product Formulations	 MERCK	\$780M
 pci PHARMA SERVICES	 CHURCHILL from nuveen	\$650M

Robust Demand and Active M&A Market Projects Sustained Growth of the CDMO & CMO Sub-Sectors

POTENTIAL STRATEGIC INVESTORS

BIOPHARMA SERVICES INDUSTRY | HIGHLIGHTS, TRENDS & OPPORTUNITIES

Strategics



Rationale

Complement existing capabilities for end-to-end services offering.

Growth Investors

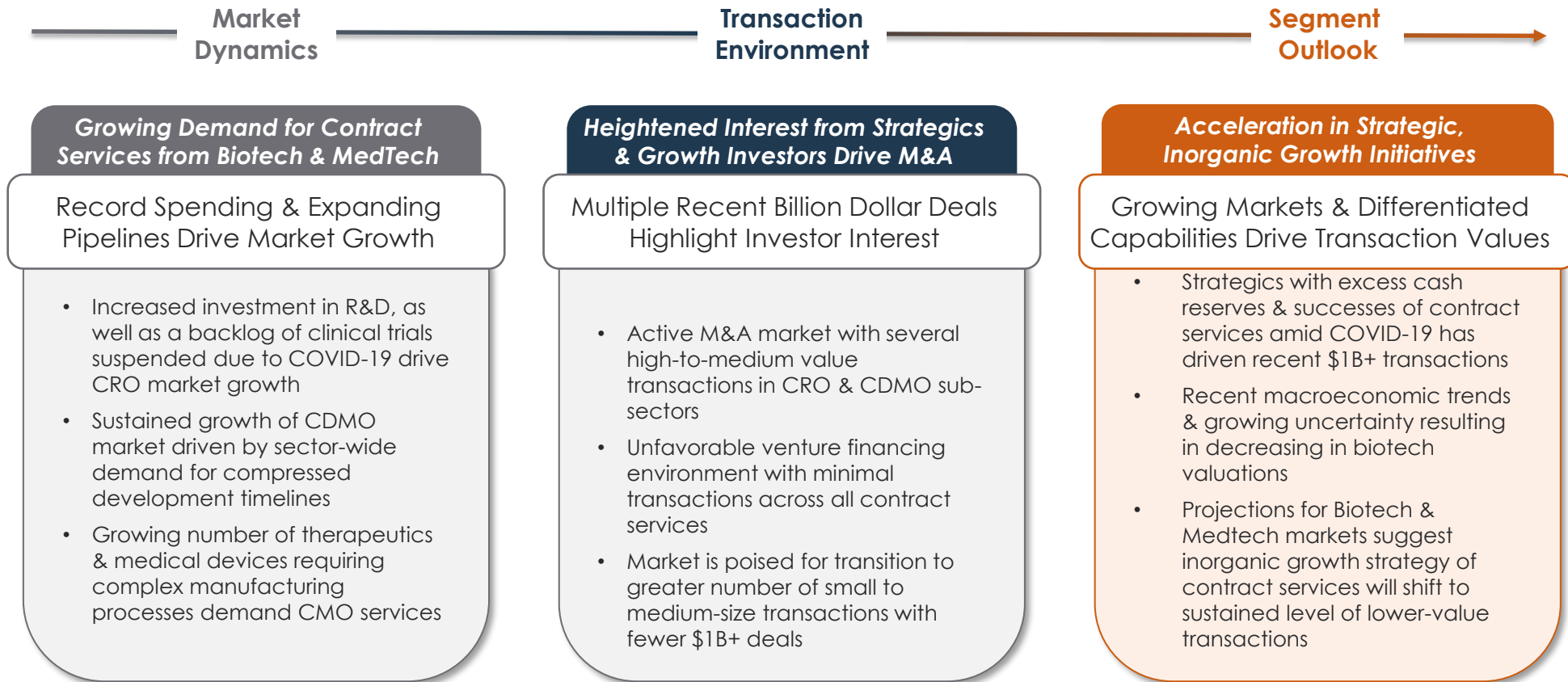


Rationale

Optimize profitability to position for strategic exit.

BIOPHARMACEUTICAL SERVICES SECTOR

BIOPHARMA SERVICES INDUSTRY | HIGHLIGHTS, TRENDS & OPPORTUNITIES



Active M&A Environment Expected to Continue with a Trend Towards More Medium-Sized Deals



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