



# AI and Biopharma: New Solutions Emerging Across the Value Chain

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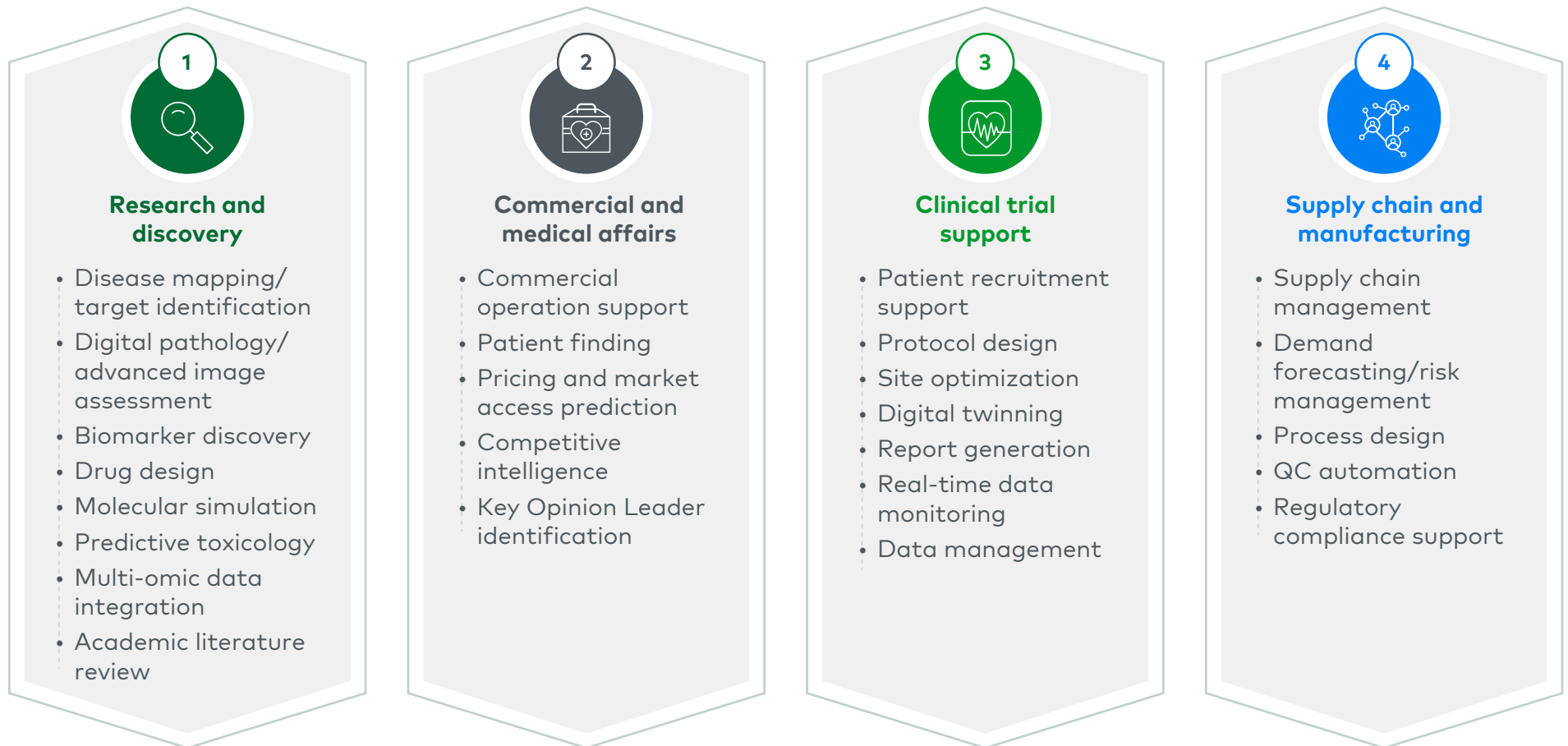
Artificial intelligence (AI) is transforming every stage of the value chain across the pharmaceutical industry, from drug discovery and development to manufacturing, clinical trials and commercialization. In the past year, the pace of innovation has accelerated substantially. By rapidly analyzing vast datasets, AI accelerates the identification of potential drug candidates, predicts therapeutic efficacy and aids in designing precision treatments.



In clinical trials, AI-driven models optimize patient recruitment, streamline trial processes and improve patient monitoring, leading to faster and more cost-effective studies. In manufacturing, AI enhances quality control, predicts equipment maintenance needs and optimizes production processes. Finally, AI supports commercialization by analyzing market trends, personalizing marketing efforts and enhancing supply chain efficiency, ultimately ensuring faster and more targeted delivery of treatments to patients.

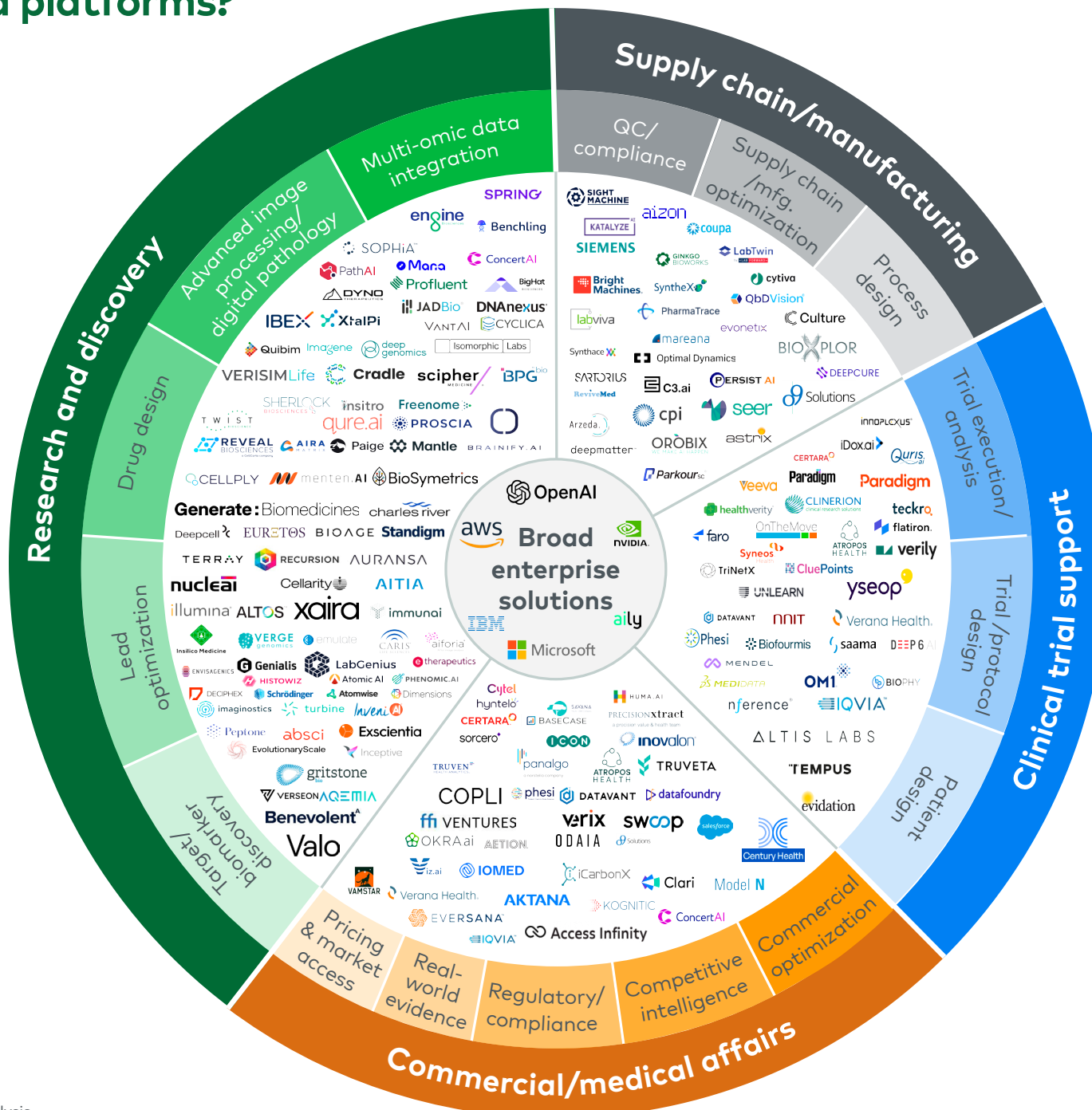
## Where are AI-enabled solutions being implemented?

### Applications and use cases for AI in biopharma



Note: AI=artificial intelligence  
Source: L.E.K. research and analysis

# Who is partnering with biopharma to provide AI-enabled tools, services and platforms?



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# A critical time to evaluate AI opportunities across R&D, manufacturing and commercialization

L.E.K. Consulting's global Life Science practice supports biotech, pharma, contract research organizations, contract development and manufacturing organizations, and other industry participants to address a wide range of strategic needs related to AI-enabled technology development and implementation, including:

- 1 Process auditing and identification of opportunities for new AI-enabled technology
- 2 Partner evaluation and selection
- 3 Solution implementation and integration
- 4 Return on investment forecasting
- 5 Platform and technology pricing strategy
- 6 Transaction support including sell- and buy-side diligence





If you or your organization is interested in discussing opportunities for AI-enabled technologies and optimal strategies to prepare, please [reach out](#) to us. The AI landscape around biopharma is evolving rapidly, and we welcome feedback on new initiatives and offerings for inclusion in our database. Please contact [Alex Guth](#) for inquiries and recommended inclusions.

We would like to thank [Eric Lenz](#) for his contributions to L.E.K.'s database of AI-enabled platform and service providers for biopharma.

## About the authors



### Alex Guth

Alex Guth, Ph.D. is a Managing Director and Partner in L.E.K. Consulting's Life Sciences practice and leader of the firm's U.S. Life Sciences Pricing and Market Access practice. Alex supports clients throughout the life sciences industry, including biopharma, contract research, manufacturing and investors. He advises across a range of strategic needs, including new product strategy, pricing and transaction support.



### Phil Abboud

Phil Abboud is a Consultant in L.E.K. Consulting's Life Sciences Biopharma practice and is based in New York. Phil supports biopharma clients across new product planning, therapeutic area prioritization, organizational scale-up and transaction support.



#### About L.E.K. Consulting

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