Foreword

KPMG Insights: How AI is Reshaping Life Sciences

Artificial intelligence (AI) is no longer just a promising tool in life sciences; it is now a transformative force helping to reshape the sector. By shortening discovery timelines, personalizing treatments, and enhancing efficiencies in research and development, AI is driving remarkable advancements. Beyond its critical role in research, AI is improving operational efficiencies across core business functions such as finance, procurement, and supply chain management, as well as optimizing back-office processes to help ensure overall organizational effectiveness.

At the same time, these advancements come with critical challenges, such as ensuring data integrity, addressing regulatory scrutiny, and defining meaningful value beyond mere cost savings. In an industry where patient outcomes are of utmost importance, the success of AI will be measured not only by operational gains but also by its real-world health impacts.

Nearly 90% of life sciences executives recognize AI's potential to accelerate research and development while reducing costs; however, 82% express pressure from stakeholders to deliver immediate returns on AI investments.

At KPMG, we believe organizations should expand their definition of ROI to fully capture the value of their investments. While productivity and revenue growth are important metrics, they do not tell the whole story. Effective programs should also measure improvements in service delivery quality, product development speed, and customer experience. Life science leaders must balance immediate and long-term priorities, investing now to build a future that effectively utilizes AI.

> As life sciences leaders push the boundaries of their AI initiatives, they are also tasked with articulating the value these investments bring. They must align AI's capabilities with their comprehensive business and talent strategies, clearly indicating where value is created at each stage, balancing investment with tangible outcomes that advance patient care, data management, and operational excellence.

Kristin Pothier
KPMG U.S. Life Sciences Sector Leader

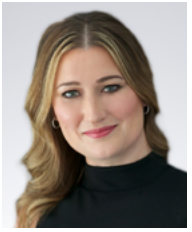
Foreword

KPMG Insights: How AI is Reshaping Life Sciences

To help navigate the challenges presented by AI, we outline a three-phase framework for AI-driven transformation in life sciences:

1. **Enable:** Establish the foundational capabilities necessary for AI success, including robust data infrastructure, regulatory compliance frameworks, and an AI-literate workforce. Addressing barriers such as data silos, security concerns, and ethical considerations is critical at this stage.
2. **Embed:** Integrate AI into core business processes, aligning AI initiatives with strategic goals and fostering cross-functional collaboration. This phase ensures AI is deployed in high-impact areas like clinical development, manufacturing optimization, and personalized medicine.
3. **Evolve:** Drive enterprise-wide AI adoption and continuous innovation. This involves expanding AI applications, adapting to emerging technologies, and fostering an agile mindset to respond to regulatory shifts and market demands. Organizations that reach this stage will set the benchmark for AI-powered healthcare solutions.

The next era of life sciences will be defined by those who intentionally embrace AI—balancing innovation with responsibility, speed with safety, and technological advancement with human expertise. By investing in the right AI strategies today, organizations can create a future where scientific breakthroughs occur more rapidly, healthcare is more personalized, and patients benefit from a smarter, more efficient life sciences ecosystem. Please contact me to discuss how we can support your AI journey.



Kristin Pothier
KPMG U.S.
Life Sciences Sector Leader
E: kpothier@kpmg.com