



The Use of AI in Pharmaceutical Commercialization:

Insights From the Field

Evaluate¹
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 **BIOPHARMA DIVE**

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AI is quickly changing every aspect of our world, or so the headlines say. This emerging technology is touted as having revolutionized drug discovery, with AI-designed drugs reportedly achieving success rates of 80% to 90% in Phase 1 trials, compared with the traditional industry average of 40% to 65%.¹ In pharmaceutical commercialization, however, adoption is proceeding much more slowly. AI promises to transform commercial decision-making into a much more data-driven, proactive discipline, but adoption and maturity vary widely across organizations and even individual business units.

If harnessed effectively and built on the right data foundation, AI has the potential to make forecasting more dynamic, portfolio strategy sharper and dealmaking less risky. Once this potential is fully realized, AI will enable commercial teams to make faster, more confident decisions about where to invest, which assets to prioritize and how to maximize their value. At present, though, it is unclear how long it will take the industry to reach this enlightened state.

To better understand how biopharmaceutical leaders think about AI transformation, Evaluate recently partnered with BioPharma Dive to survey 150 industry executives about their companies' current and future plans to integrate AI into commercial processes. The respondents represented a diverse sample of senior decision-makers from the U.S., United Kingdom and Canada, most working for companies with more than \$100 million in annual revenue, across a broad array of commercial functions. The report that follows presents the main findings from this research.

80-90%

AI-designed drugs reportedly achieved success rates of 80% to 90% in Phase 1 trials.¹



FINDING NO. 1

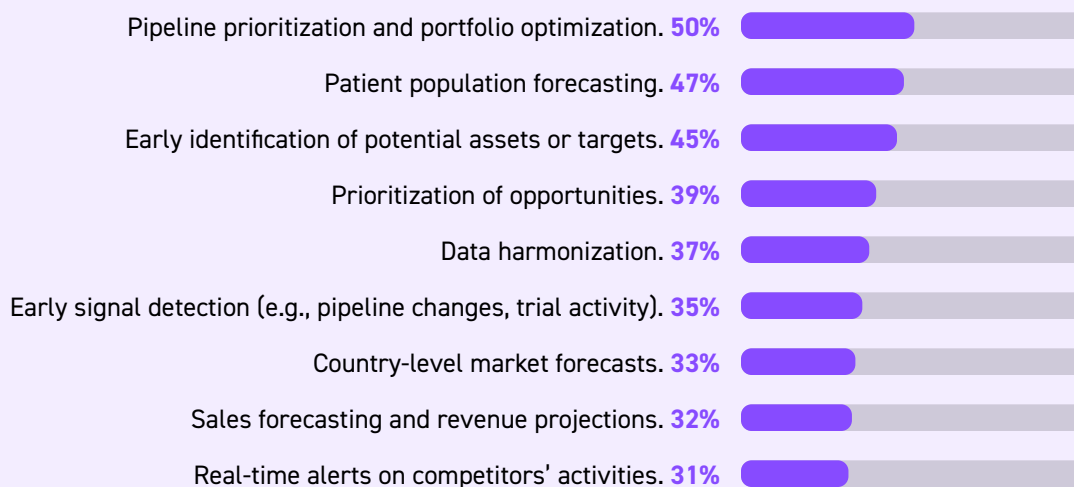
AI is being tested for many use cases in pharmaceutical commercialization, but ROI is uneven.

According to the survey, most biopharmaceutical executives characterized their company's adoption of AI across commercial functions as "early" or "developing." They were using these tools for an array of use cases, most commonly market sizing (72%), pipeline prioritization (50%) and portfolio optimization (50%). This appears to be a scattershot approach, in which organizations test AI for a variety of use cases, hoping to figure out where the value lies.

Yet the results they reported they achieved from these experiments appeared mixed. On the one hand, there's a great deal of confidence and optimism about AI: 97% of pharmaceutical executives agreed that AI was improving commercial decision-making in their organizations. Yet only 9% viewed its role as transformational. Most (51%) said it was balanced somewhere between overhyped and having real value.



In which of the following commercial activities is your organization currently using AI?

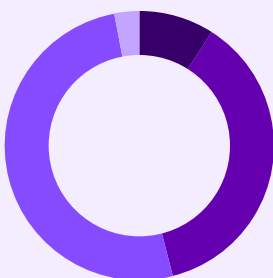


Many survey participants saw significant barriers to broader AI adoption in their companies' commercial arms, with 44% reporting a lack of integration with existing systems and workflows as a major inhibitor and 40% saying a lack of internal skills and AI literacy was holding their organization back.

Nearly 80% of pharmaceutical decision-makers said they didn't see data quality and readiness as a major barrier to AI adoption. However, the quality and robustness of the underlying data foundation

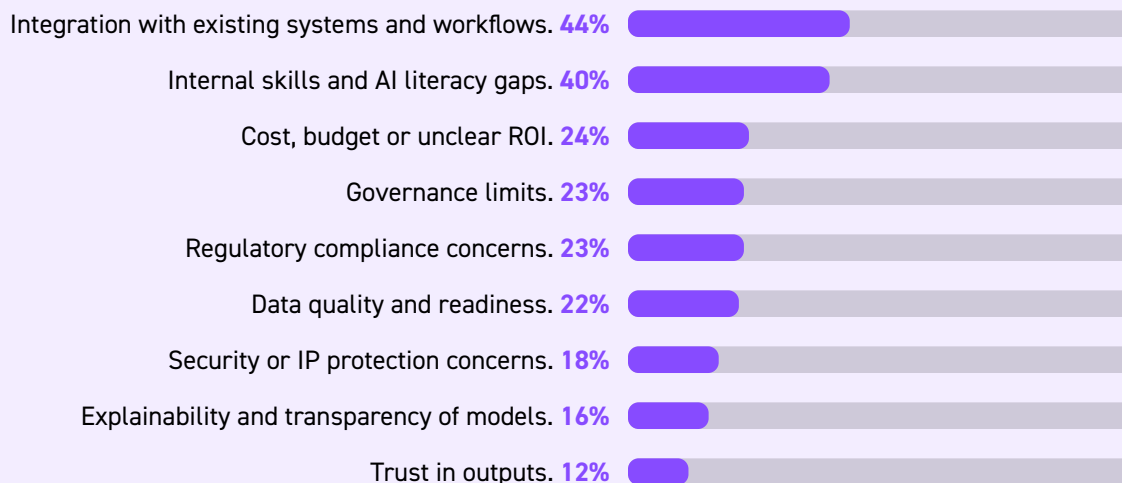
are critical to the accuracy of AI outputs, Vince Spurr, solutions consultant at Evaluate, explained. "If you're training a large language model on imperfect data — data where there are inaccuracies, gaps or holes — what it learns will be based on those (poor) data inputs. Thinking about source-data quality is vital to the success of any AI initiative. How is the data structured? How was it cleaned and transformed? There's a lot of work that goes into preparing best-in-class data. If that work isn't done, the accuracy of the model's outputs will never be as good as it could be."

Which of the below statements best reflects your view of AI's role in pharmaceutical commercialization today?



- 9% Transformational.
- 37% More reality than hype, but many claims about it are exaggerated.
- 51% Balanced between hype and reality.
- 3% More hype than reality, but delivering some value.
- 0% Mostly hype.

What are the biggest barriers to broader AI adoption within the commercial arm of your organization?



Most commercial teams use general-purpose AI tools rather than specialized solutions designed for their industry's unique needs and compliance requirements.

Consumer-grade AI tools are wildly popular among the general population, so it's unsurprising that many pharmaceutical industry stakeholders bring the tools they're familiar and comfortable with to work. A very large majority (95%) of biopharma executives reported that the AI tools used in their companies were general-purpose tools such as ChatGPT and Microsoft Copilot. Only 27% used purpose-built, pharma-specific tools, although 23% used custom AI tools developed in-house.

There are issues with this approach. Sensitive or regulated data cannot be shared with publicly available large language models (LLMs). This inherently limits the use cases to which the technology can be applied. Data harmonization, for instance, is most relevant for proprietary and company-specific data, which cannot be input into a general-purpose AI tool. In addition, the model's decision-making is typically a black box, which means that outputs aren't defensible. For use cases such as market forecasting or evaluating potential targets for acquisition, where millions if not billions of dollars are on the line, it's important that decision-makers understand why the models make these particular recommendations.

“General-purpose AI tools do have value. If you're writing a presentation or you've got a dozen emails you want to summarize, ChatGPT or Claude is a perfectly appropriate tool. But if your company is trying to answer a question like, 'Should I license this product?' or 'How much will this drug be selling six months after launch, and what will its value be in 10 years?' general-purpose AI tools aren't going to give you a useful response. They haven't been trained on the right data, and they can't deliver answers that are based on a rigorous methodology so that they're robust and defensible.”

Andrew Ward, head of forecasting at Evaluate

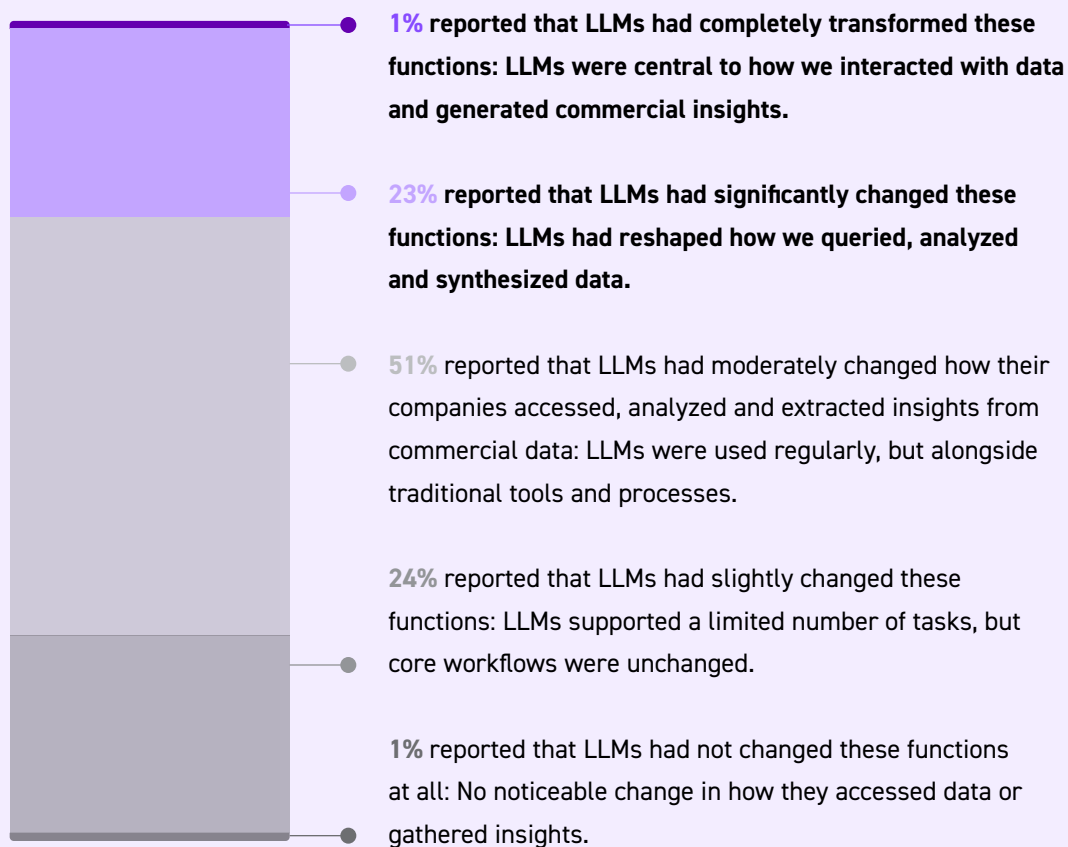




Perhaps because general-purpose LLM tools are so widely used in pharmaceutical companies, these organizations do not see a tremendous effect on their ability to extract insights from specialized data. Less than one-quarter (24%) of participants said that LLMs had had a significant or transformative effect on how their companies accessed, analyzed and extracted insights from commercial data.

AI has the potential to do so much more.

To what extent have large language models (LLMs) changed how you access, analyze and extract insights from commercial data?



FINDING NO. 3

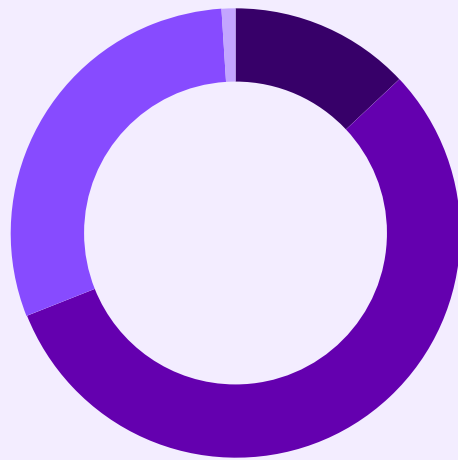
Pharmaceutical executives lean toward overconfidence in AI-generated forecasts.

More than two-thirds (69%) of survey participants said they were more confident in the accuracy of AI forecasts than those developed using traditional approaches. None had less confidence.

Despite this purported confidence, only 13% of pharmaceutical executives said they believed the biggest benefit AI could deliver in forecasting was greater accuracy. Instead, the major benefits they saw were greater speed (21%) and increased efficiency (20%).

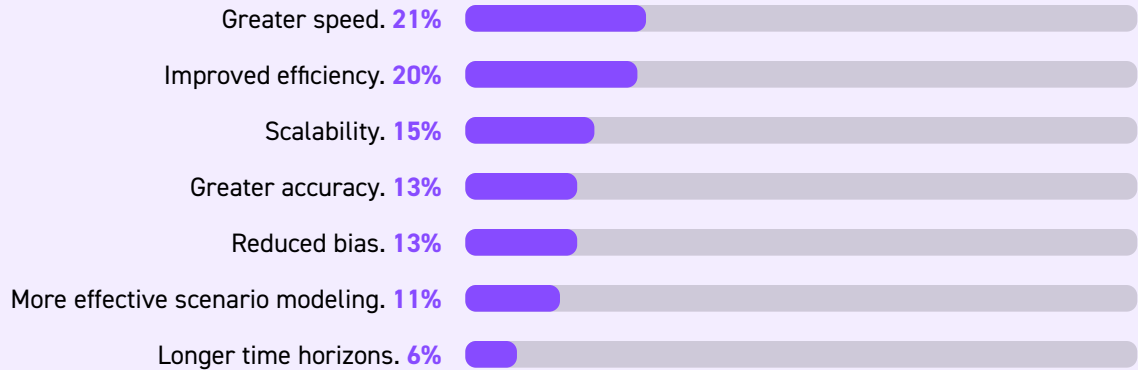


Compared with forecasts created using traditional approaches, how confident are you in the accuracy of AI-driven forecasts?



13% had much more confidence.
56% had slightly more confidence.
30% had about the same level of confidence.
1% had slightly less confidence.
No one had much less confidence.

What is the single biggest benefit AI can deliver in forecasting?



In forecasting, methodologies are extremely important. Data quality matters, but even beyond that, treating the same data in two different ways will yield different results. If there's no rigorous methodology behind the process, the results won't be defensible. General-purpose AI tools — which weren't trained on high-quality, industry-specific datasets — can't create defensible or accurate forecasts.

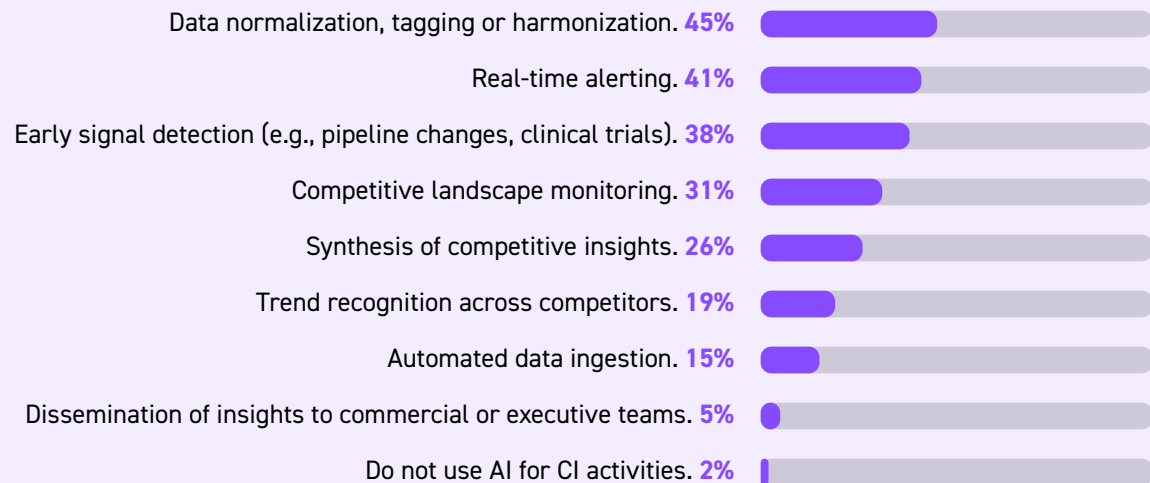
Beyond that, it's also important to consider the purpose of the forecast and whether accuracy is even the most important consideration, Ward explained.

"If you've got a product that is four or five years from launch, you can't be very accurate, and you shouldn't be trying to be. That's not the point of forecasting at that stage of the product life cycle. The point is to enable an understanding of what's possible for the product, the range in which it could land. Is it \$50 million, \$500 million, \$5 billion? It's only when you get closer to launch, and postlaunch, that forecasting needs to be accurate and precise, because supply chains and sales targets are running off it. There are times when an AI forecast is going to be pretty good and it's going to be very quick. There are contexts where that's helpful, but even then, it still needs to be defensible. However, there are other contexts where accuracy is needed more than speed."

Andrew Ward, head of forecasting at Evaluate

AI is saving today's competitive intelligence teams only limited amounts of time.

In which of the following competitive-intelligence activities does AI deliver the greatest value to your company today?



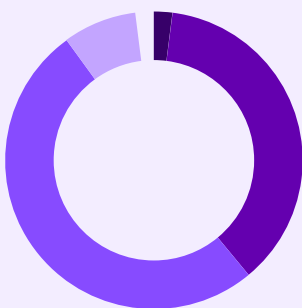
AI is being applied in an array of competitive-intelligence (CI) activities in pharmaceutical companies today. Yet it's saving these teams only limited amounts of time and delivering outputs only somewhat reliable.

Most survey participants reported that the time saving their competitive-intelligence teams experienced because of AI use was moderate, with 51% saying that AI had saved their company's CI team a limited amount of time, while 8% reported that they had saved very little time. However, 37% reported that AI had saved these teams a lot of time.

Few pharmaceutical executives said they believed that AI-derived competitive insights were unreliable, and few believed them extremely reliable.

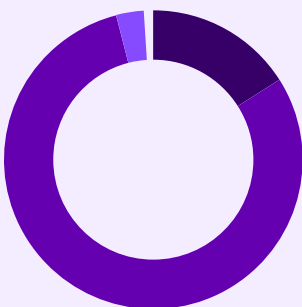
"I'm not surprised that the competitive-intelligence teams rate the reliability of insights and time saving from AI relatively low," Spurr said. "There was always a sense that competitive intelligence was likely to be the first area to be disrupted by AI, since there's now a tool available that can see everything in the public domain. But the reality is that the strongest competitive-intelligence teams are also the ones who have the best understanding of the outputs. They're very knowledgeable about comparing different data points from various sources to figure out what's correct. So when they interact with Claude or Copilot, they're able to see right away when something's not right."

How much time has AI saved your organization's CI team?



- 2% reported that AI had saved a significant amount of time.
- 37% reported that AI had saved a lot of time.
- 51% reported that AI had saved a limited amount of time.
- 8% reported that AI had saved very little time.
- No one reported that AI had saved no time at all.

How reliable are AI-driven competitive insights today?



- 16% said they believed these insights were extremely reliable.
- 80% said they believed these insights were somewhat reliable.
- 3% said they believed these insights were somewhat unreliable.
- No one said they believed these insights were extremely unreliable.

FINDING NO. 5

Opinions on the value that AI can contribute in dealmaking are split.

In almost all companies (98%), AI is either likely to become a standard input into licensing and M&A decisions or already is a standard input. The biggest benefit that AI is believed to deliver in dealmaking is enabling early identification of potentially valuable assets or targets.



Where does AI add the most value in dealmaking today?

62% reported that the benefit that AI could deliver the most value to in dealmaking was early identification of potential assets or targets.

47% Risk modeling and probability-of-success assessment.

42% Identification of red flags or downside risks.

42% Prioritization of licensing or acquisition opportunities.

32% Benchmark analysis.

29% Commercial due diligence support.

29% Deal scenario modeling.

17% Postdeal portfolio integration assessment.

To what extent has AI reduced deal risk or uncertainty?



1% said they believed that AI had reduced deal risk or uncertainty enormously.

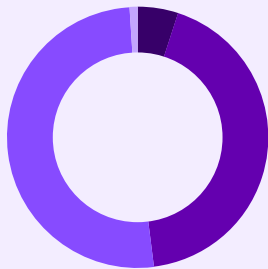
41% said they believed that AI had reduced deal risk or uncertainty a great deal.

52% said they believed that AI had reduced deal risk or uncertainty somewhat.

5% said they believed that AI had reduced deal risk or uncertainty slightly.

No one said they believed that AI had not reduced deal risk or uncertainty at all.

How valuable is AI in helping your company identify high-potential assets earlier?



5% said they believed that AI was extremely valuable.

43% said they believed that AI was very valuable.

51% said they believed AI was somewhat valuable.

1% said they believed AI was not too valuable.

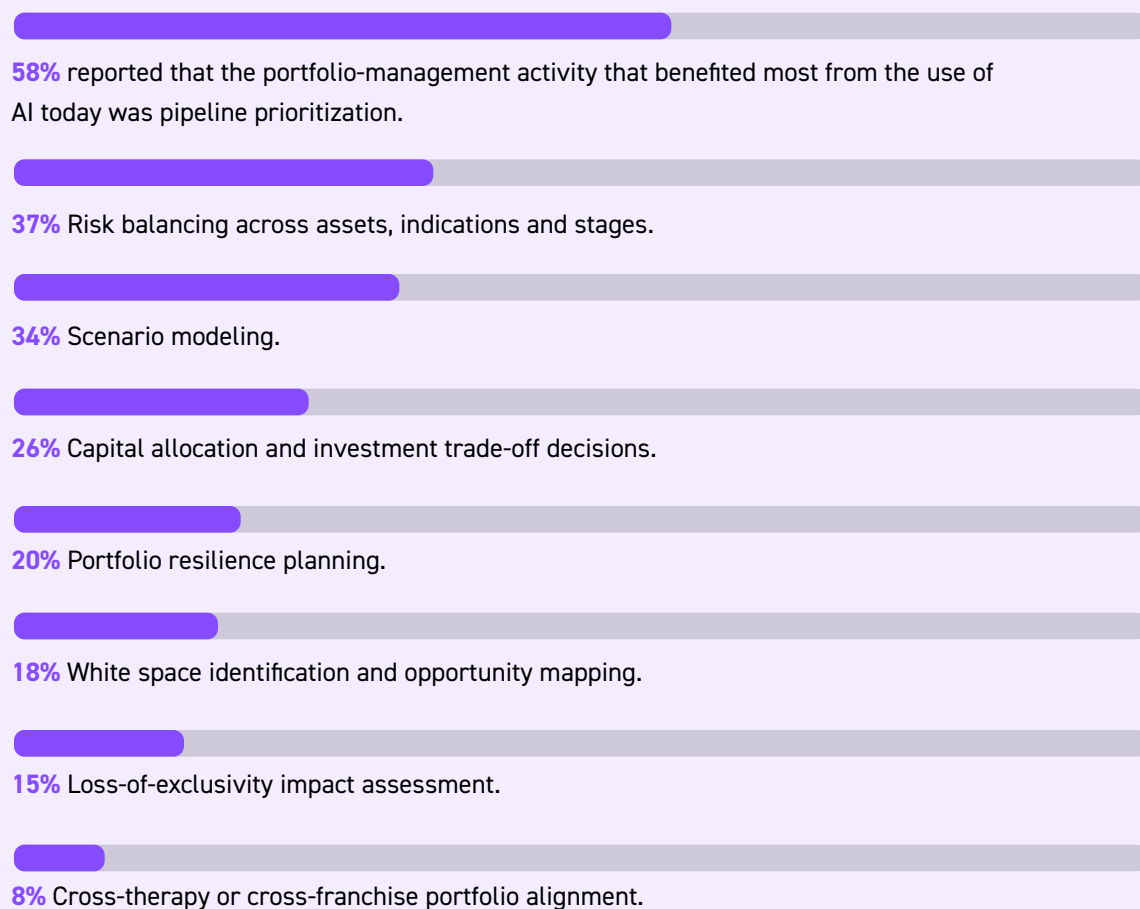
No one said they believed that AI was not valuable at all.

Yet only 5% of respondents said they believed AI was extremely valuable when it came to helping companies identify high-value targets earlier. Most (52%) said they believed it was only somewhat valuable or not too valuable. There's muted enthusiasm about this, the top use case for AI in dealmaking.

Most survey participants said they didn't believe that AI had had a transformational effect on deal risks. Only 1% said they thought AI had reduced deal risk or uncertainty enormously, while most (57%) said they believed it had reduced deal risk somewhat or slightly.

AI is being applied in multiple portfolio-management functions right now, but with limited influence over strategic decision-making.

Which portfolio-management activities benefit most from the use of AI today?



A significant majority (58%) of biopharmaceutical execs reported that the portfolio-management activity where AI was delivering the most value today was pipeline prioritization.

Most pharmaceutical leaders (71%) said they believed that AI would have more influence over portfolio-strategy decisions in the future than it did today.

“Portfolio-harmonization and market-opportunity assessments — looking at where the market’s going — is a place where general-purpose LLMs can deliver value. Before AI, there always tended to be biases, since internal perspectives are influenced by groupthink within the organization. What the LLMs can do is to provide access to a broader universe of sources, which enables people to think from a more open perspective. However, purpose-built LLMs trained on best-in-class proprietary data will always be able to deliver richer and more accurate results.”

Vince Spurr, solutions consultant at Evaluate

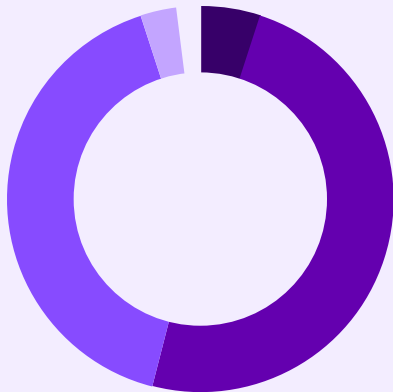


FINDING NO. 7

AI's effect is only just beginning to be felt.

In the next three years, AI is expected to become embedded in more commercialization workflows across the industry. Only 5% of respondents said they believed it would become central to all commercial decision-making, but 49% said they believed AI would be embedded in most workflows. Nearly half (41%) anticipated that there would be broader adoption across additional functions.

How do you expect your organization's use of AI in commercial activities to change over the next three years?



5% Few biopharma executives expected that, over the next three years, AI would become central to all commercial decision-making.

49% AI would become embedded in most commercial workflows.

41% There would be broader adoption across additional functions.

3% expected just an incremental expansion of current use cases.

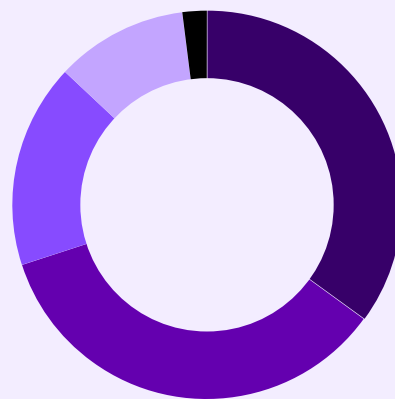
No one expected no meaningful change

These leaders said they believed that the parts of the product-development life cycle that would see the greatest effect from AI in the next three years would be clinical development and commercial planning.

But survey participants noted that AI would become truly indispensable only when it was able to:

- Provide consistently valuable insights.
- Identify opportunities that would otherwise be missed.
- Deliver accurate competitive intelligence.
- Enable better decision-making.

In your opinion, which part of the pharmaceutical life cycle will see the greatest effect from AI in the next three years?



35% Clinical development.

35% Commercial planning.

17% Competitive intelligence (17%).

11% Portfolio prioritization (11%).

2% End-to-end.

CONCLUSION

Reliably integrating AI into pharmaceutical commercialization will require leveraging high-quality data and industry-focused solutions, rather than treating AI as a casual experiment with general-purpose tools. Value comes from training models on structured, high-quality data that's harmonized across the organization so that models can understand the full context of commercialization decisions.

AI's full promise will be realized only when its outputs are tempered with human commercial and clinical expertise. This means that models need to show why they recommend a certain decision so that users can adjust assumptions and tweak variables. Only when conclusions are supported by nuanced evidence and grounded in a rigorous, defensible methodology can they support million- or billion-dollar decisions.

Evaluate helps pharmaceutical companies gain more value from AI by embedding it directly into commercial analytics tools they already use and providing access to trustworthy, curated data so AI outputs are based on high-quality evidence. Partnering with Evaluate lets you enjoy the upside of AI adoption — faster, sharper decision-making — while remaining confident that these decisions are grounded in robust evidence, transparent assumptions and industry-leading methodologies.

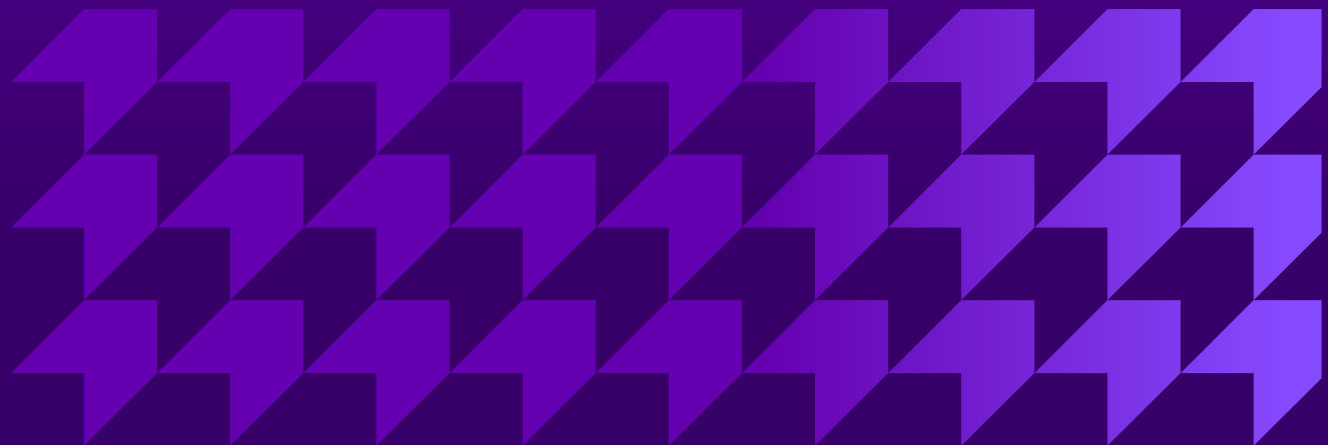


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