CapeStart's Life Science AI Research Report

September 15, 2024

Methodology

Method	9-Minute Survey 14 Questions
Audience	Life Science Professionals
Sample Size	142
Fielding Period	July 5, 2024 – September 3, 2024

This report explores life sciences professionals and their sentiments on AI, examining:

- Perspectives on AI
- Current AI Initiatives
- AI Capabilities & Support
- AI-Related Goals
- Impact Areas
- Barriers to Success
- Perspectives on Outsourcing
- Sources of Information
- Professional Associations
- Sources of Information
- Respondent Details

Executive Summary

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Life sciences professionals shared the following key insights on AI in this report:

- Ninety-one percent of respondents believe AI can assist and empower their work, while only 7% are skeptical.

- Three-fourths of respondents are using, testing, or exploring AI solutions, with only a quarter not considering AI yet.

- Although 57% report having the capability to implement AI strategies, they also lack sufficient vendor support to do so effectively.

- Almost half (49%) of respondents have AI goals centered around improving efficiency, with some still waiting for standards or in discovery phases.

- Workflow efficiency, document generation, summarization, and clinical research are viewed as areas where AI could drive the most business impact.

- Major barriers to AI adoption include lack of expertise, concerns about data accuracy and quality, and cost constraints.

- Teams are looking to vendors to provide expertise and expedite their AI initiatives.

- Respondents belong to various professional associations like ASCO, ESMO, and ISPOR, and rely on journals and industry websites for insights.

Research Findings

Belief in AI's Potential

Most respondents think AI can help them, with 91% believing, at least, to some degree that it can assist and empower their work and just 7% skeptical of its value.
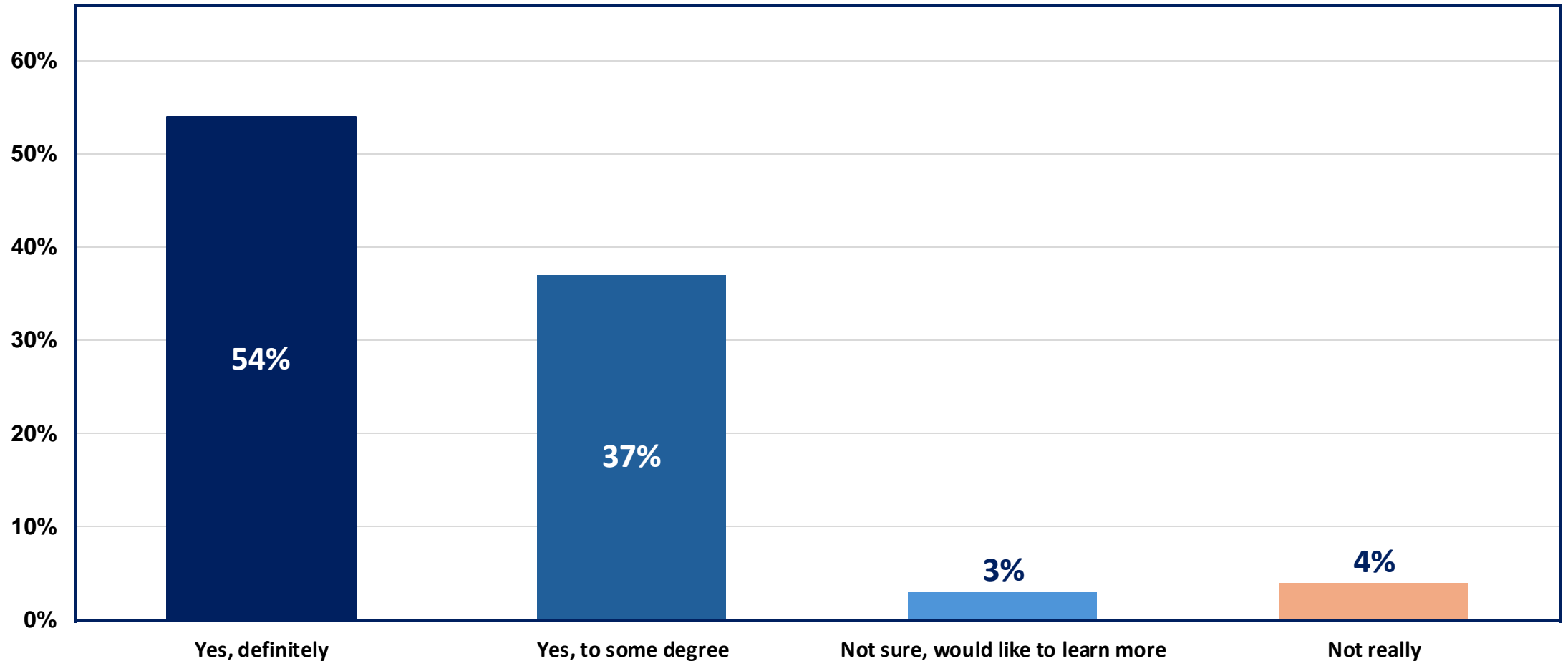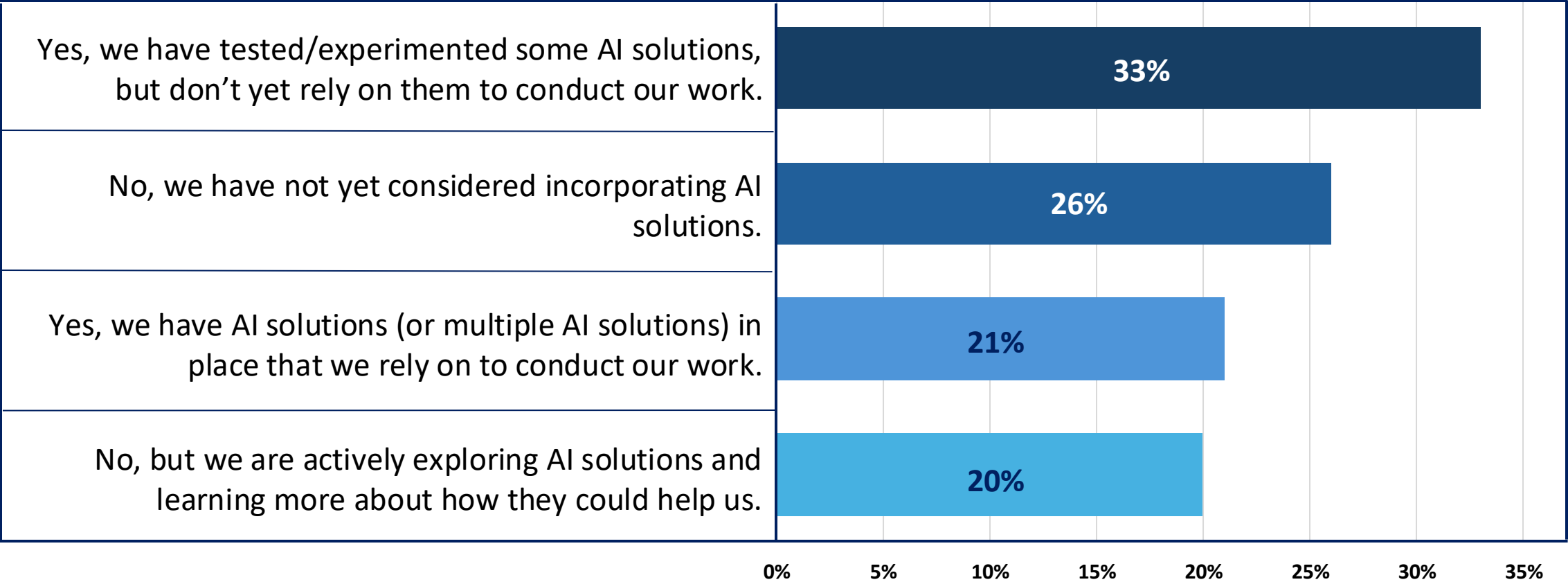
Q1. Do you currently believe that Artificial Intelligence (AI) can assist and empower your work?   n=142

Current AI Initiatives

Three out of four respondents are using, testing, or actively exploring AI solutions, with just a quarter not considering them yet.

Response	Percentage
Yes, we have tested/experimented some AI solutions, but don't yet rely on them to conduct our work.	33%
No, we have not yet considered incorporating AI solutions.	26%
Yes, we have AI solutions (or multiple AI solutions) in place that we rely on to conduct our work.	21%
No, but we are actively exploring AI solutions and learning more about how they could help us.	20%

Q2. Are you currently involved with one or more AI initiatives? Choose the response that best fits your team's status regarding use of AI.   n=138
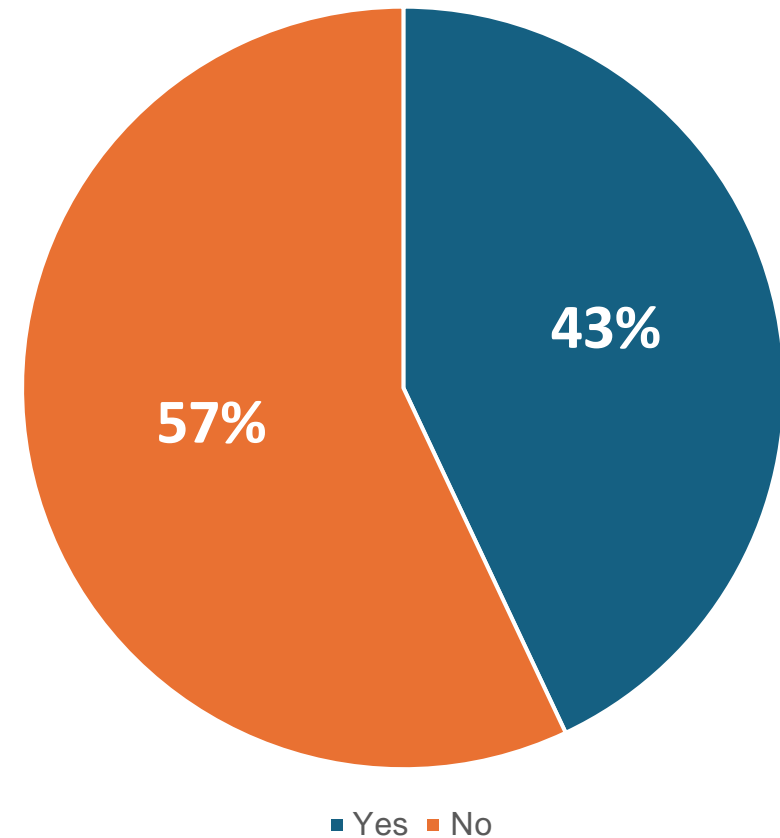
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AI Capabilities & Support

Though 57% of respondents report that they have the capability to implement their AI strategies, the same number lack support from vendors to help them with their strategy.

■ Yes ■ No

■ Yes ■ No
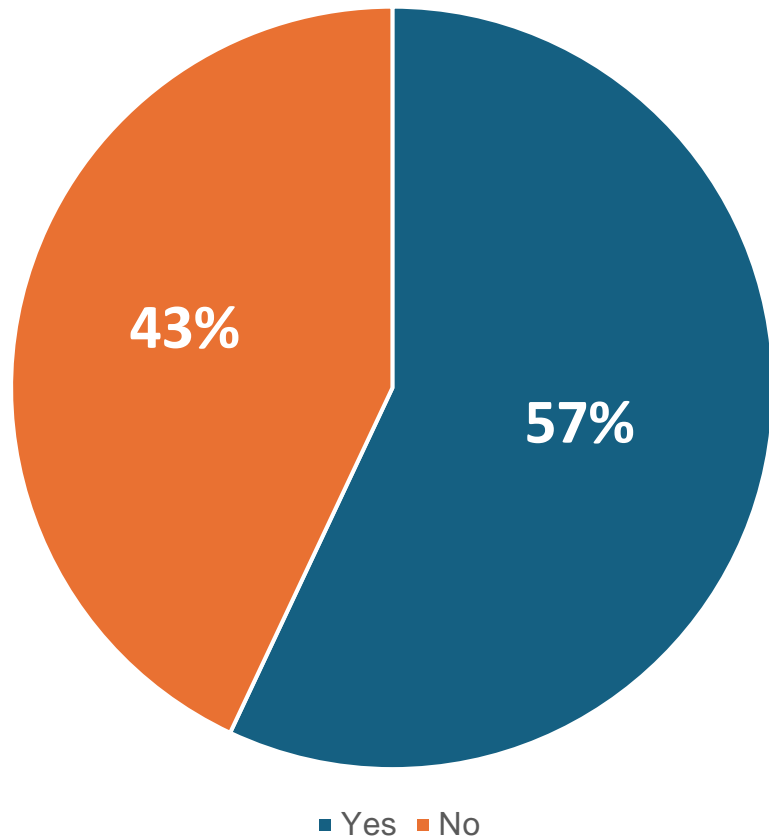
Q3. Does your team have the capability to implement your AI strategy?   n=130
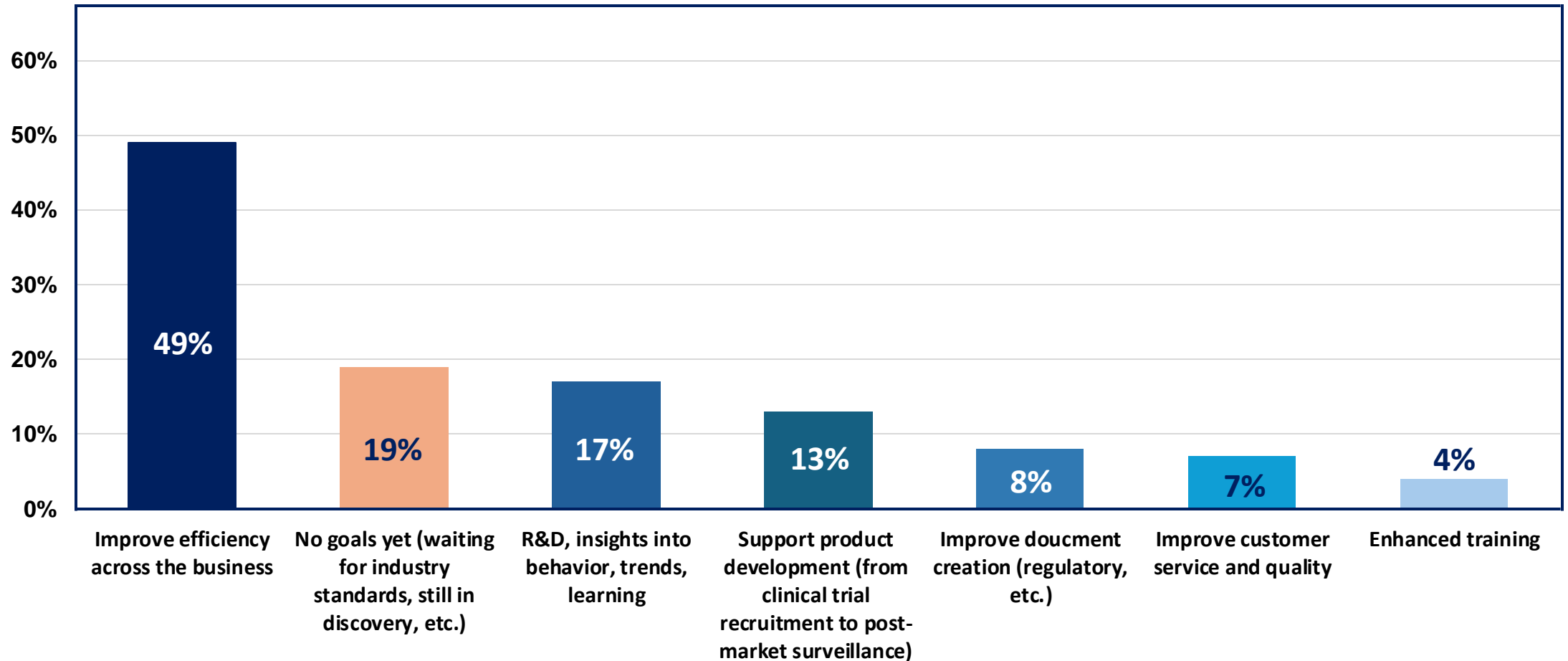
Q4. Do you have vendors to help you with your AI strategy?   n=129

Team AI-Related Goals

Nearly half of respondents (49%) have AI goals around efficiencies across the business, with one in five respondents reporting no AI goals yet, though many in discovery or waiting for standards.

Category	Percentage
Improve efficiency across the business	49%
No goals yet (waiting for industry standards, still in discovery, etc.)	19%
R&D, insights into behavior, trends, learning	17%
Support product development (from clinical trial recruitment to post-market surveillance)	13%
Improve doucment creation (regulatory, etc.)	8%
Improve customer service and quality	7%
Enhanced training	4%

Q5. What are your team's goals related to exploring AI to improve team performance?   n=120

AI Impact Areas

Respondents report that workflow efficiency, document generation and summarization, and clinical research are the top areas they believed AI could have the greatest business impact.

Workflow Efficiency

Document Generation & Summarization

Clinical Research

analysis · device · discovery · Strategies · investigators · Manufacturing · quality · inspections · models · analytics · categorizing/simplifying · Regulatory · Affairs · creation · Repeated · Generative · saving · Research · documents · Clinical · personalized · treatment · Desk · generation · molecules · Planning · review · scheduling · Process · Marketing · Operations · decision · evaluations · writing · advocate · critical · communication · language · Patient · Summarization · Drug · Predicting · identify · over · pathways · inner · mining · Sales · algorithm · tasks · Data · require · proofing · Statistical · effort · trials · budget · time · Efficiency · Simplifying · More · routine · work · healthcare · content · Software · efficient · Medical · improvements · Take · Improve · Business · tech · preclin · Accounting · Speed · support · Service · Predictive · email · identification · Therapy · testing · information · right · Improved · summarizing · targets · programming · fwd · Workflow · Customer · new · R&D · optimization · patterns · development · Document · documentation · Improving

Q6. What are the top three areas of your business where you think AI could have the greatest impact?   n=111

Barriers to Success with AI

Respondents feel out-of-their depths with AI and hesitant to trust the innovation, with lack of expertise and concerns for data accuracy and quality ranking among the top barriers to success for team implementing AI strategies. Cost also looms as a barrier.

Expertise & Knowledge

Cost & Budget Constraints

Data Accuracy & Quality

Q7. What are the top three barriers to success for your team implementing your AI strategy?

n=104

Respondents lack AI expertise and resources to execute their AI project and are looking for vendors to help them expedite their AI initiatives quickly.

Expertise & Knowledge

Speed in Expediting

Resource Constraints

Q8. What are the top three reasons that would make you choose to employ an outsourcer to develop new solutions for your company or team rather than build them in-house?

n=94

Professional Associations

Respondents belong to a variety of professional associations across therapeutic areas and life science specialties, among them:

- ASCO & ESMO (Oncology)
- ASH (Hematology)
- IEEE-EMBS (Biomedical & Health Informatics)
- ISPOR (Health Economics Outcomes Research)
- RAPS (Regulatory Affairs)
- ASQ (Quality)
- PMI (Pharma Management)
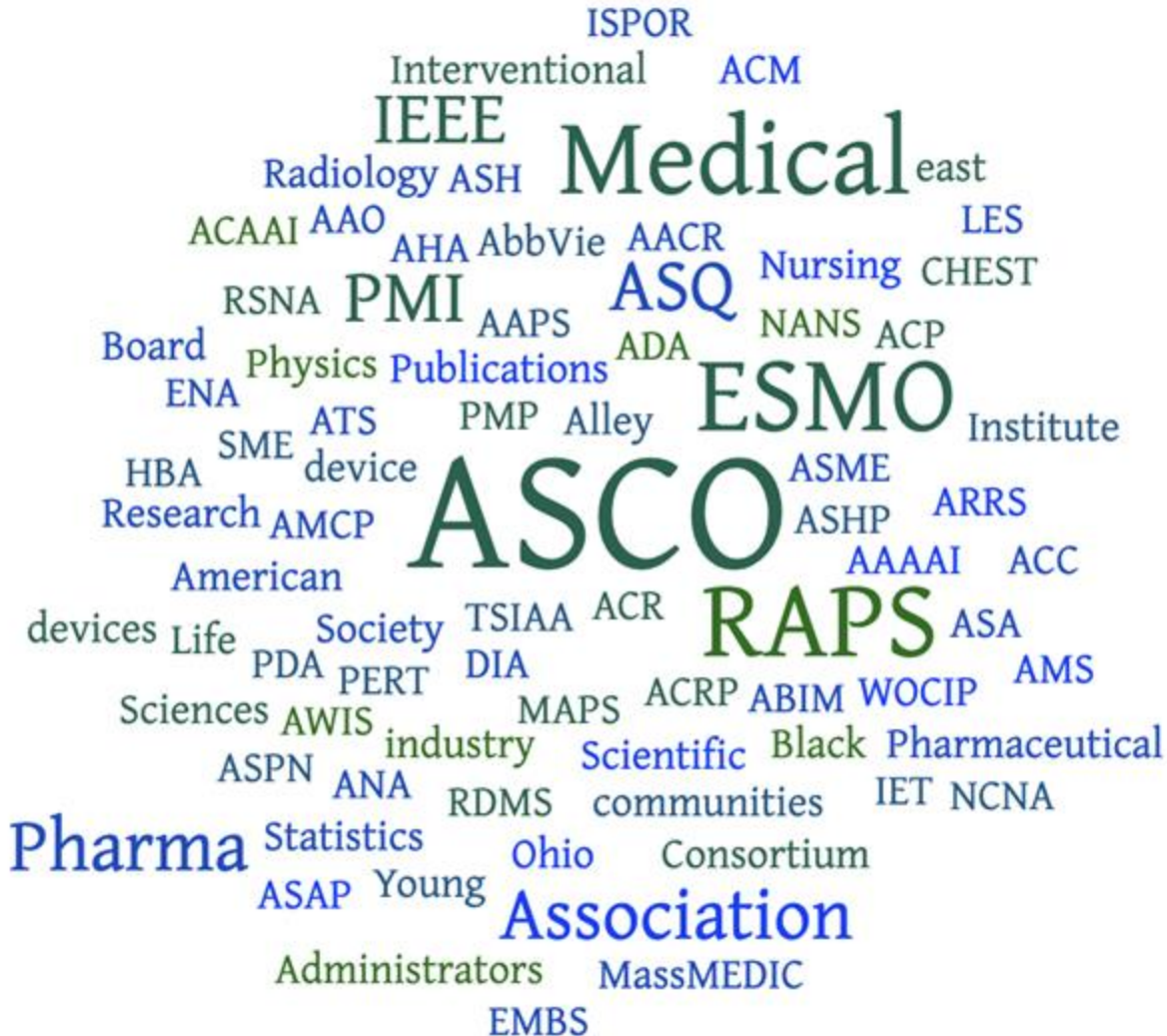
Q9. Please share any professional associations to which you belong.

n=92

To stay informed on industry topics, respondents seek formation journals publications, professional associations (e.g., ISPOR), and industry websites (e.g., Fierce Pharma).

Journal Publications

Industry Associations

Industry Websites

Q10. What are your top three sources of information that keep you informed on current best practices, top trends, and emerging technologies in life sciences?   n=92

Respondent Details

Respondent Profile

Survey respondents present the following characteristics:

- They primarily fall between 35 and 54 years in age
- A third are director level (including senior director), 20% were clinical (including medical directors), and nearly the same number were chiefs
- About two-thirds are men and a third women
- Forty-five percent report they have a PhD. or Medical Degree, and a further 32% have earned their masters
- On average, they've been in the life science industry 15 on average, with an average 13 years in their functional areas, and they typically spend seven years typically with their employers

GenAI Titles

More than one-third of respondents are director or senior director level professionals. One-fifth are clinical leaders (including medical directors and scientists), with nearly the same number in CXO positions. VPs represent 13% of respondents, while 15% are from a variety of different areas including quality, operations, and business development.
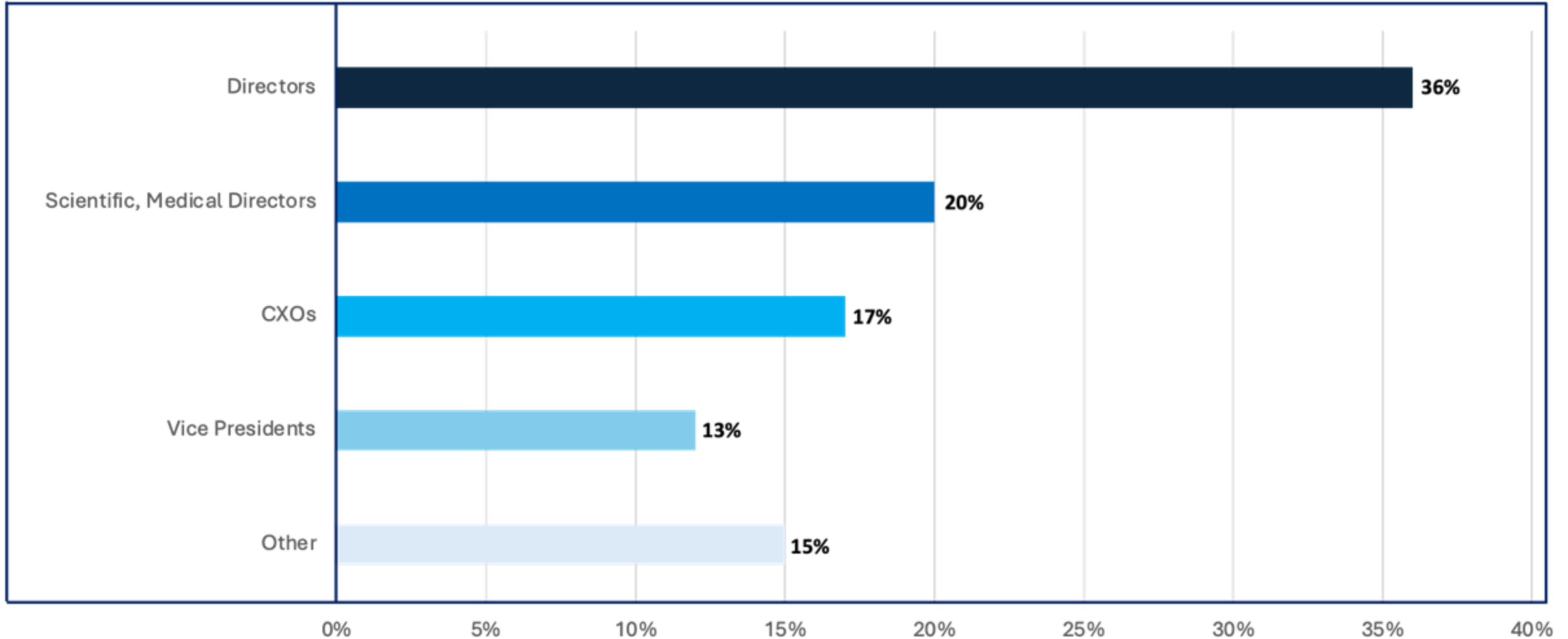
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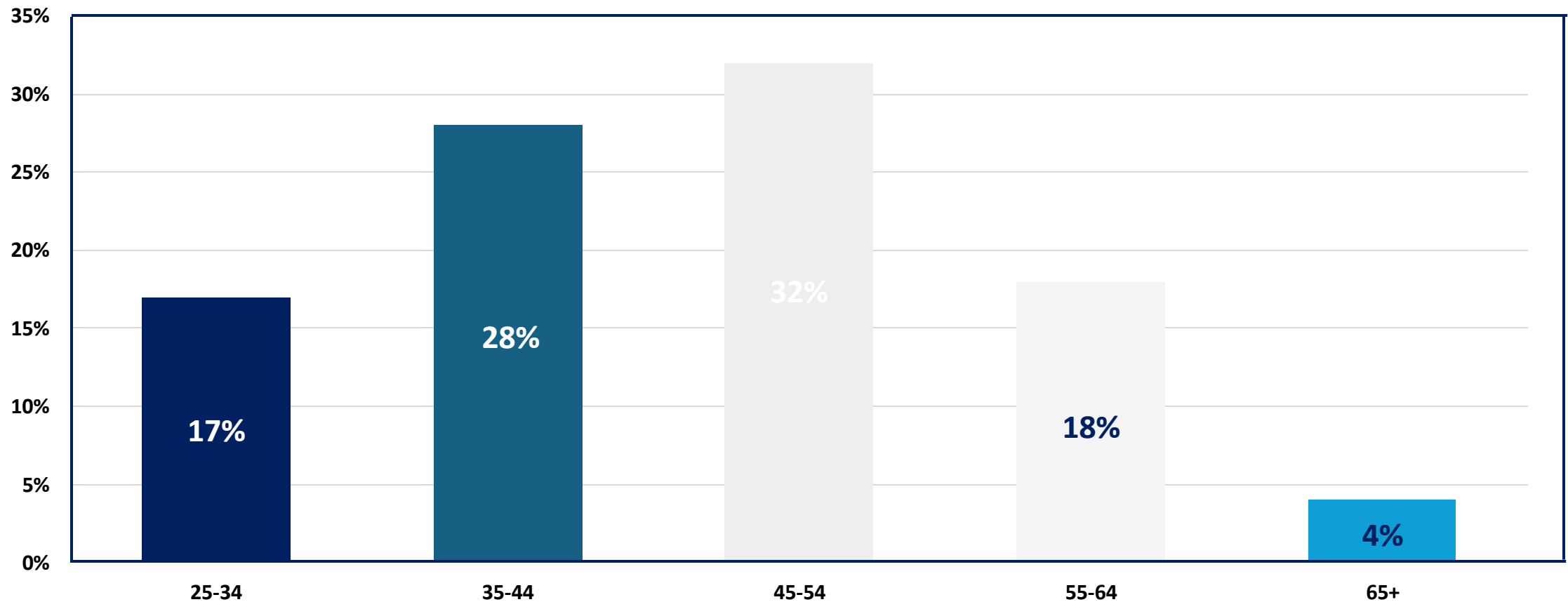
About two-thirds of respondents identify as male, 30% female, and 7% prefer not to say.
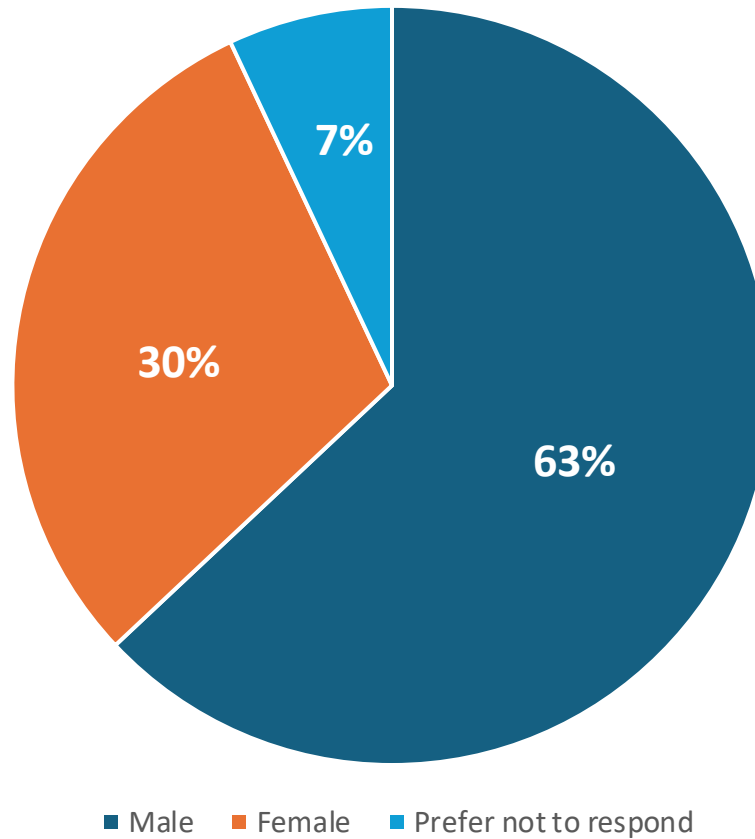
7%

30%

63%

■ Male ■ Female ■ Prefer not to respond
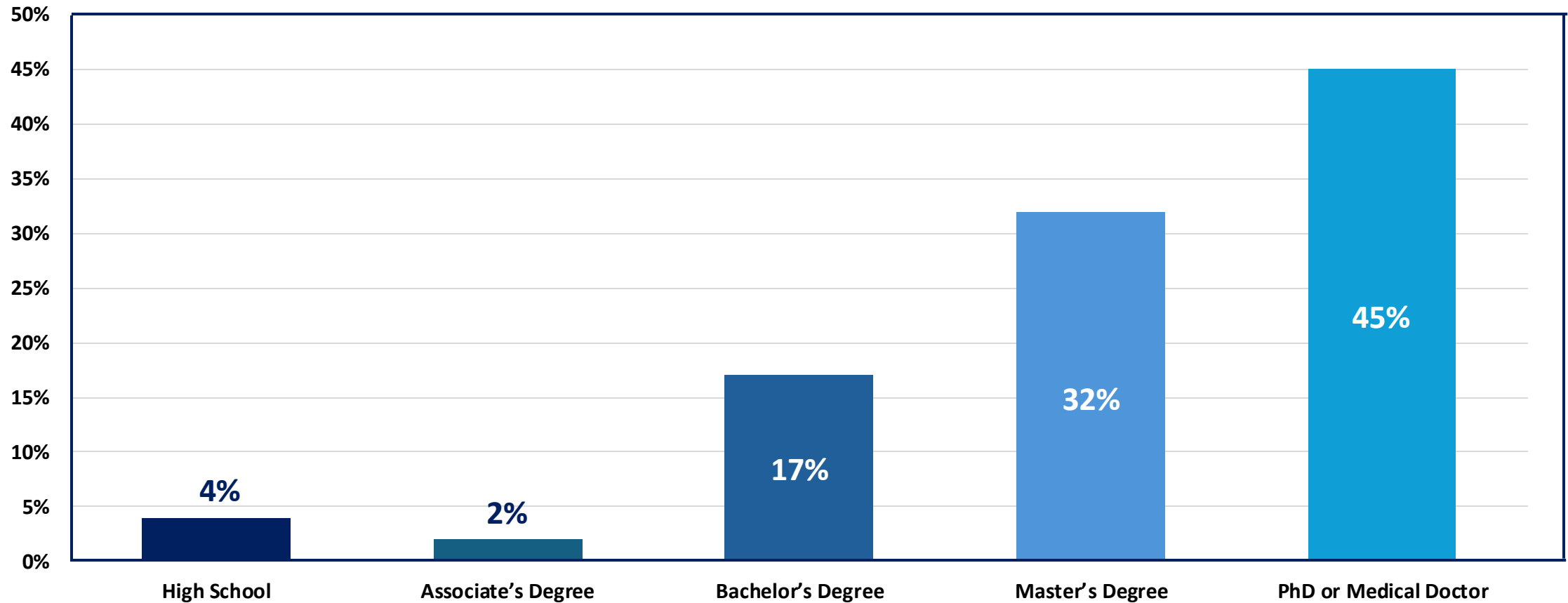
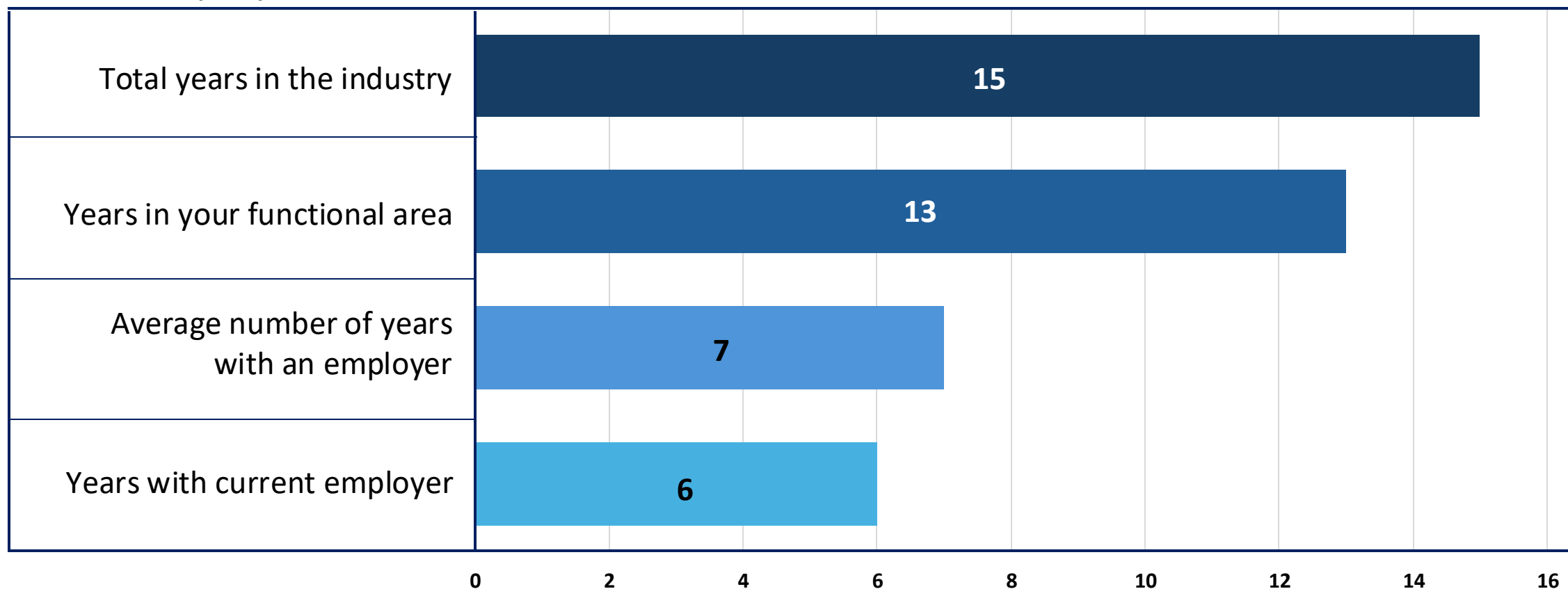Q39: What is your gender?   n=87

Professional Experience

Respondents have been in the life science industry 15 on average, with an average 13 years in their functional areas. Nesters, they spend seven years typically with their employers.

Category	Value
Total years in the industry	15
Years in your functional area	13
Average number of years with an employer	7
Years with current employer	6

Q13: Please share your years and experience?   n=87

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