

Navigating the Stages of AI Value Creation for **Healthcare**



Executive summary

AI has come a long way since 1956, when John McCarthy first coined the term at a conference he organized at Dartmouth College.¹ The unprecedented pace of innovation, along with the accessibility of ChatGPT and other generative AI tools, has galvanized virtually every organization.

Given the number of AI technologies, the possible uses, and the range of opportunities, it can be challenging to know where to start.

To better understand key drivers of AI readiness and their impact on AI readiness, Microsoft commissioned IPSOS to conduct a research study using qualitative data from experts and quantitative data from more than 1,300 information technology and business leaders across a range of industries and regions.²

IPSOS then used the survey data to build a predictive model to help identify the stage of AI readiness—from exploring to realizing.

This book provides our research findings for healthcare, focusing on how industry leaders can realize the value of AI.

Industry summary

Healthcare

The healthcare industry is exploring opportunities in AI with early investments. While this sector's focus on privacy and regulation sometimes means slower timelines, healthcare can continue to benefit from AI adoption.

Leverage our healthcare-specific insights and use cases to create value with AI. Based on a study commissioned by Microsoft and conducted by IPSOS, this guide identifies the key stages of AI readiness and drivers of AI and offers best practices and next steps for realizing value with AI in healthcare.

153

Healthcare decision-makers participated in this research

Research, methodology, and modeling

Market	Total	IT decision-makers	Business decision-makers
United States	n=500	251	249
India	n=200	100	100
United Kingdom	n=200	100	100
Germany	n=207	103	104
Japan	n=206	105	101

The research behind this e-book included multiple phases conducted by IPSOS on behalf of Microsoft. In August of 2023, IPSOS conducted an expert workshop with representatives from business and academia. They then conducted a quantitative survey of enterprise business and IT decision-makers (BDMs and ITDMs) on the topic of AI readiness and success from September to October of 2023.

These decision-makers had a budget responsibility, covered a mix of business factors and departments, and represented enterprise or higher mid-market organizations (500+ employees for U.S organizations, 300+ employees for global markets). They also covered 4 core industries,

financial services (212 individuals), healthcare (153 individuals), manufacturing (171 individuals), and retail (89 individuals). We obtained input from more than 1,300 decision-makers in multiple markets, including the United States, India, United Kingdom, Germany, and Japan.

The survey included more than 40 questions related to each of the five drivers of AI success: business strategy, technology and data strategy, AI strategy and experience, organization and culture, and AI governance. The analyses and models described in this paper were created using multinomial logit analysis to protect the AI readiness level of each driver using the items

in the survey for each and then the overall AI readiness from the predicted assessment of the five drivers.

For each stage of AI readiness, the study identified typical values to represent the stage’s characteristics and opportunities. For example, in the initial “exploring” stage, the responses to all the scale questions were at a value of 1. Similarly, for the “planning” stage, questions were set at a value of 2. The values serve as standard examples for each stage. However, the specific recommendations for an industry might differ, depending on the organization’s unique situation and opportunities.

Healthcare AI readiness summary

Healthcare organizations are increasingly investing in AI solutions with an eye toward resilience and optimization. Early progress underscores the transformative possibilities in the healthcare sector for AI to help streamline operations and alleviate administrative burdens. This not only allows clinicians to dedicate more attention to patient care but also boosts workforce morale.

Among healthcare organizations:

12%

Spend more than **\$5M on cloud** per month

Cross-industry average: 9%

62%

Seek to increase **operational efficiency** through AI investments

Cross-industry average: 59%

53%

Of **IT departments** are currently using AI

Cross-industry average: 49%

45%

Are open to **deploying new technology** after it's been tested by others and proven its value

Cross-industry average: 42%

59%

Prioritize **security and compliance** when selecting AI tools and solutions

Cross-industry average: 53%

3%

Have started on premises or have not begun migration to the **public cloud**

Cross-industry average: 6%

57%

Allocate **budget and resources** for AI projects

Cross-industry average: 51%

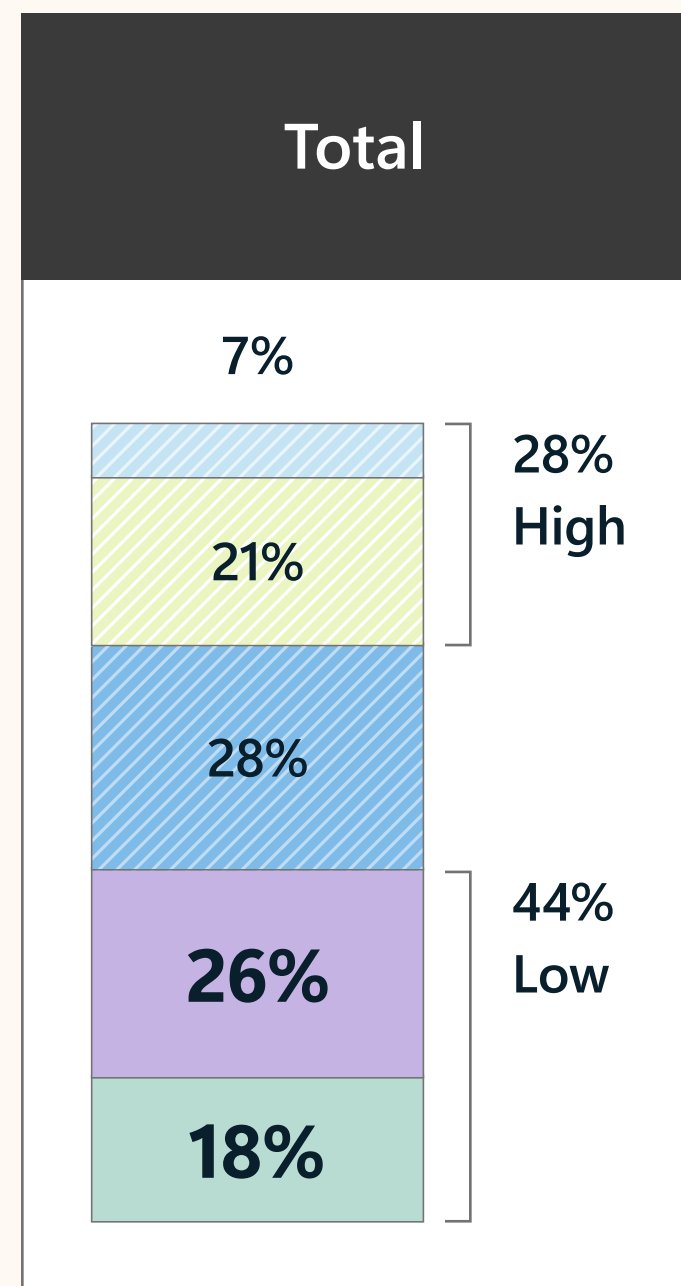
18%

Have a **chief AI officer**

Cross-industry average: 20%

Healthcare AI readiness insights

Healthcare stages of AI readiness



Overall AI readiness in healthcare

There is an exciting mix of AI readiness in the healthcare industry, with notable progress evident across various stages. While 28% of organizations are in the “scaling” and “realizing” stages, there’s considerable optimism in most organizations, with 44% actively laying the groundwork in the **“exploring” and “planning” stages**.

These initial stages of AI readiness involve learning about AI, experimenting with it in various parts of the organization, and actively assessing, defining, and planning an AI strategy across the entire organization. The healthcare sector ranks above the 25% average in overall maturity at 28%, which is the highest of all industries in the “scaling” and “realizing” stage. Yet, 14% of healthcare organizations claim they receive no discernable value from AI, underscoring the difficulty in connecting and measuring AI investments as part of the broader business strategy.

Drivers of healthcare AI readiness

Looking at the individual drivers of AI readiness in healthcare on the following page, the research highlights the sector’s advanced stage of readiness in terms of **AI governance**, likely stemming from the focus on trust and privacy as well as the regulation and compliance requirements in the industry.

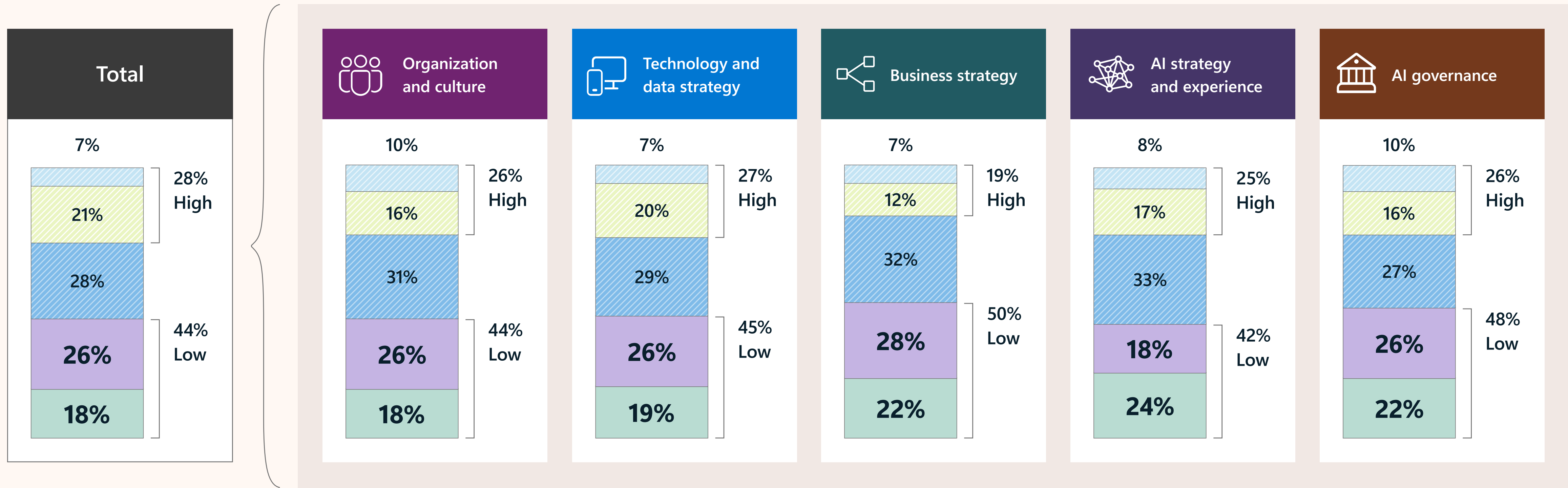
When it comes to **AI strategy and experience**, the healthcare industry leads other sectors with 25% of organizations in the “scaling” and “realizing” stages, surpassing the average. However, healthcare organizations, overall, have an opportunity to more cohesively build their **AI business strategy** with around half of organizations in the “exploring” and “planning” stages.

As a professional in the healthcare industry, focus on advancing from the “planning” stage by continuing to prioritize developing a solid AI business strategy tied to your business objectives. That foundation accelerates moving from proof of concept to implementation successfully.



Healthcare AI readiness drivers

Healthcare drivers and stages of AI readiness



Healthcare dominant AI readiness stages: Exploring and planning

Most healthcare companies are in the **exploring and planning stages** with the opportunity to use **business strategy** to advance towards realizing AI value.

Top drivers for exploring and planning stages


Business strategy

Rank #1

Healthcare faces a unique set of challenges impacting health and well-being including complex demographics, communications, and aging technology. Administrators and clinicians view secure, responsible, and trustworthy AI as essential for improving healthcare delivery, reducing costs, enhancing patient outcomes, and discovering new treatments. This strengthens business strategy by streamlining operations, driving innovation, and ensuring the organization remains competitive in a rapidly evolving industry.

Top trend

- Digital transformation

Top opportunities

- Prioritized, approved, and socialized use cases for AI
- AI used for real-time decision-making

[Learn](#) how to drive digital transformation.


Technology and data strategy

Rank #2 (tie)

Establishing a secure and reliable data lake infrastructure is crucial for integrating diverse sources of cross-institutional, multi-modal data. Data initiatives are essential for equipping clinicians with contextual point-of-care insights, refining AI models, and fostering collaboration among various stakeholders, including researchers, providers, payers, and pharmaceutical and medical device companies.


Top trend

- Data platform to operationalize and scale innovation

Top opportunities

- Access to complete and relevant data for AI modeling purposes
- Dedicated cloud infrastructure

[Uncover](#) how to shape the future of healthcare with secure data lakes.


Organization and culture

Rank #2 (tie)

The global shortage and turnover of physicians and nurses emphasizes the pressing need to utilize AI for streamlining administrative tasks. However, the main challenge lies in maintaining the effectiveness of AI systems, protecting patient data, and enabling secure collaboration for developing solutions. Strong leadership vision and expert input are crucial for addressing these challenges effectively.

Top trend

- Change management, recruiting, upskilling, and retaining workforce

Top opportunities

- Leadership has clearly communicated vision and importance of AI
- Availability of experts to contribute to AI projects

[Discover](#) how to empower employees with Microsoft Cloud for Healthcare.

Unlock the future of healthcare with AI

Most healthcare organizations fall under the “exploring” and “planning” stages although there are varying degrees of AI readiness within the industry.

To drive more organizations beyond the initial stages of AI readiness, focus on the development of a strong business strategy as a top driver.

There are opportunities for improvement in organization and culture, such as leadership clearly articulating the vision and significance of AI. Focusing on technology and data strategy, like using AI for improving security, will also help pave the way for progress towards the “implementing” stage where organizations will be poised to unlock the full potential of AI integration and maximize its transformative impact on the healthcare industry.

➔ [Get the full e-book](#) to learn how to develop an AI strategy roadmap for success and explore more valuable industry insights.

➔ Discover more at [Microsoft Cloud for Healthcare](#).

Endnotes

1. Grace Solomonoff, "The Meeting of the Minds that Launched AI," May 6, 2023, accessed February 29, 2024, [The Meeting of the Minds That Launched AI - IEEE Spectrum](#).
2. Please see the "[Research, methodology, and modeling](#)" overview for more detail on the research and analytical approaches that support this study.