



Thriving in an AI World

April 2021



Just one year ago, *Living in an AI World* signaled on all accounts that AI was starting to have real impact across industries, yet industry leaders told us that they felt it was not being implemented fast enough.

Fast forward to today, industry leaders are telling us they are experiencing what we at KPMG are calling **COVID-19 whiplash**, with AI adoption literally skyrocketing as a result of the pandemic.

Now, industry leaders are saying it's moving too fast.

In this year's *Thriving in an AI World*, it's been incredibly fascinating to see how business leaders are using AI to solve major industry problems, including the challenges brought on by COVID-19, including helping with **vaccine development** and **distribution** (life sciences and healthcare respondents), **detecting fraud** (financial services), and **improving bureaucratic efficiency** (government).

We're also seeing **optimism with the new administration** and industry leaders are conscious that controls are needed and overwhelmingly believe the government has a role to play in regulating AI technology.

Please take a moment to review findings. We hope you find this study as informative and insightful as we do. We look forward to speaking with you and advancing this conversation in the market.



Sreekar Krishna, Ph.D.
Principal, National Leader Artificial Intelligence and Head of Data Engineering



Ellen Campana, Ph.D.
Head of Enterprise Artificial Intelligence



Swami Chandrasekaran
Managing Director, Digital Solutions Architecture



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Key findings

1

The COVID-19 pandemic accelerated the pace of **AI adoption**, but many business leaders and government decision-makers indicate it's **moving too fast** for comfort.

2

Organizations are betting on AI to solve **major industry problems**, but much work remains to realize the technology's **full potential**.

3

Despite **skyrocketing adoption**, growing concerns around **security**, **privacy** and **ethics** present the biggest risks for AI.

4

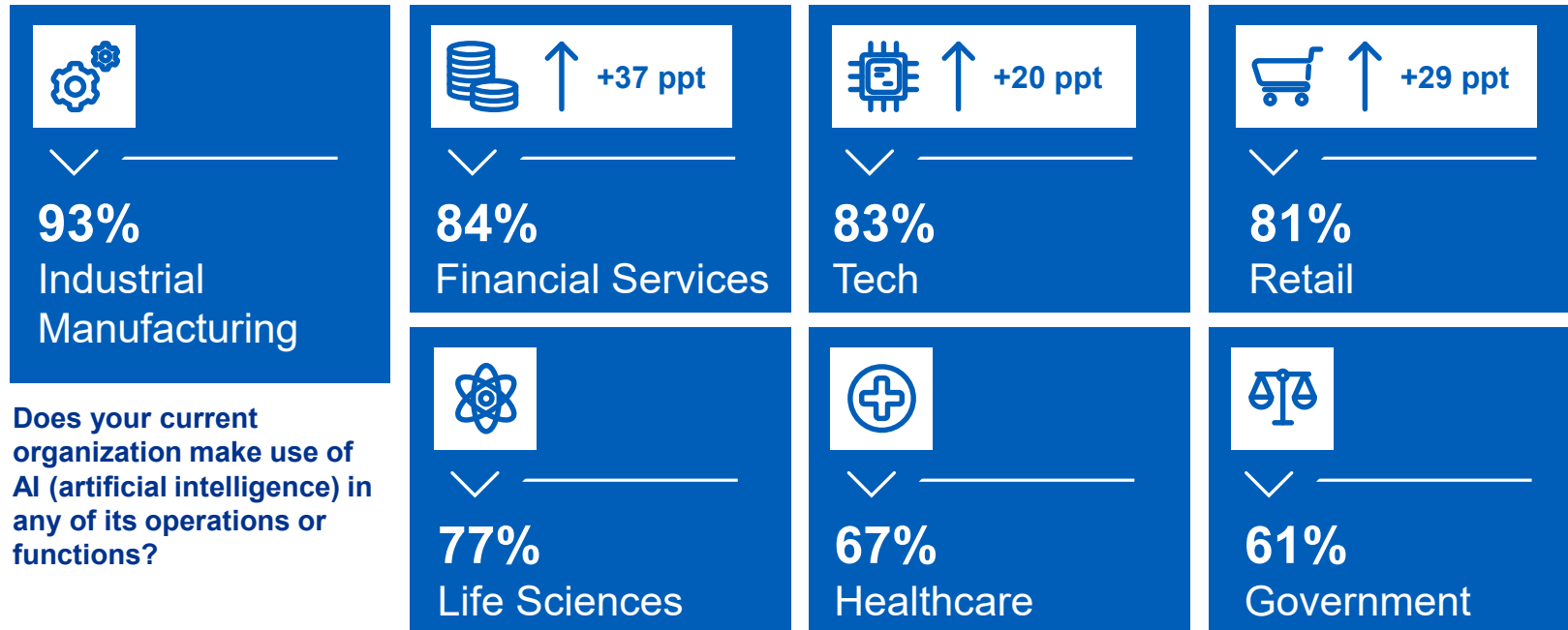
Business leaders and government decision-makers say they are optimistic the **new administration** will help **advance AI** and **support regulation** for the technology.

Momentum amid the pandemic

More than half of business leaders and government decision-makers surveyed say AI is functional at their organization



Chart 1: AI is at least moderately to fully functional in each of the seven industries KPMG surveyed.



Does your current organization make use of AI (artificial intelligence) in any of its operations or functions?

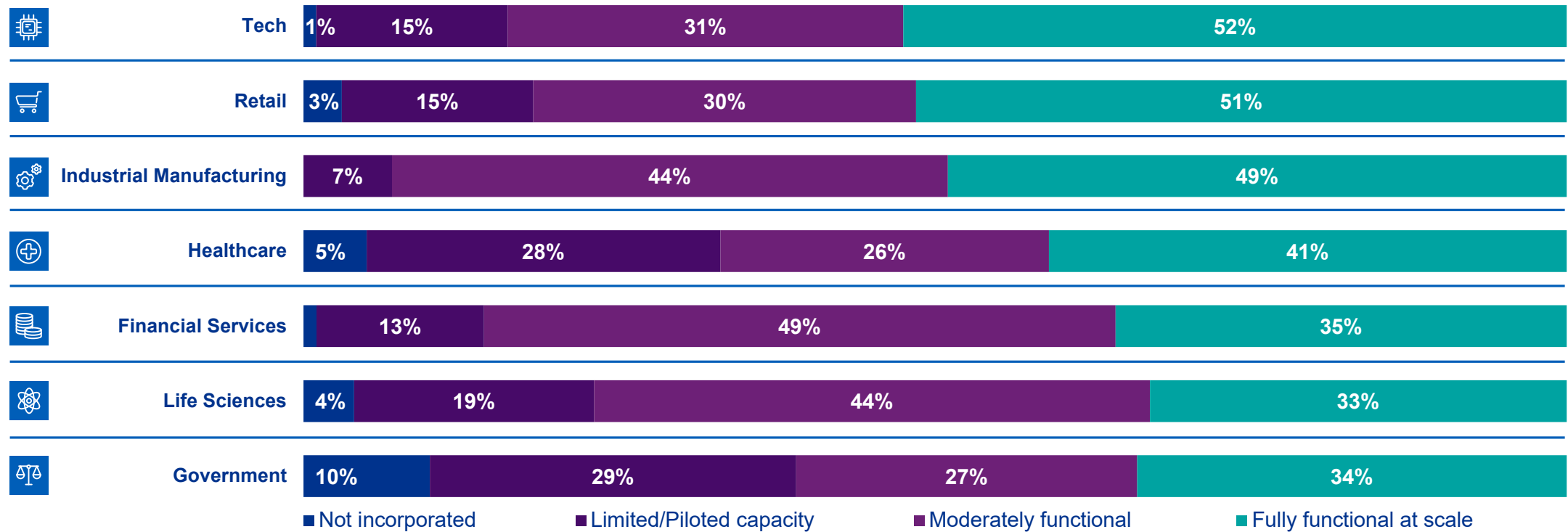
Source: KPMG 2021 *Thriving in an AI World* survey across 7 industries



Industry respondents from **small companies (88%)** are more likely than industry respondents from **large companies (75%)** to say AI is at least moderately to **fully functional** in their organization.

The level of AI functionality varies across industries with technology, retail and industrial manufacturing leading the pack

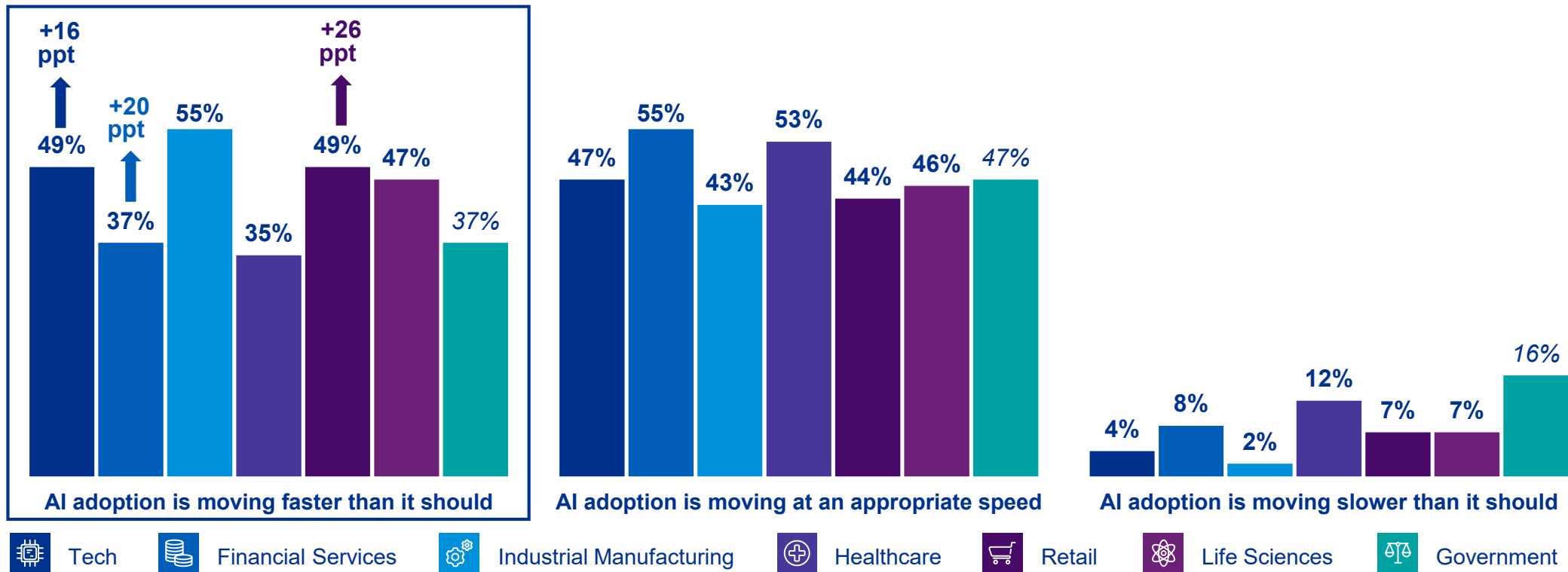
 Chart 2: Current use of AI in operations or functions.



Source: KPMG 2021 *Thriving in an AI World* survey across 7 industries

As AI adoption increases, large percentages of business leaders indicate the technology is moving too fast for comfort

 Chart 3: Perception of pace of AI adoption across industries.



Source: KPMG 2021 *Thriving in an AI World* survey across 7 industries



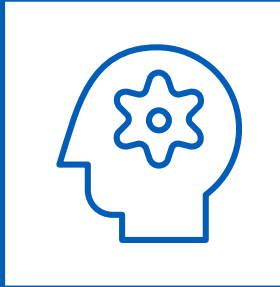
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Business leaders from small companies and with high AI knowledge, including younger industry respondents, believe AI is moving faster than it should



Small company

Industry respondents from **small companies** are more likely than total industry respondents to feel **AI adoption is moving faster** than it should (63% vs. 44%).



High AI Knowledge


Half (51%) of industry respondents with **high AI knowledge** feel **AI adoption is moving faster than it should** compared to 44% of total industry respondents.



Younger industry respondents

Younger (Gen Z and Millennial) industry respondents are more likely than total industry respondents to feel **AI adoption is moving faster than it should** (51% vs. 44%).

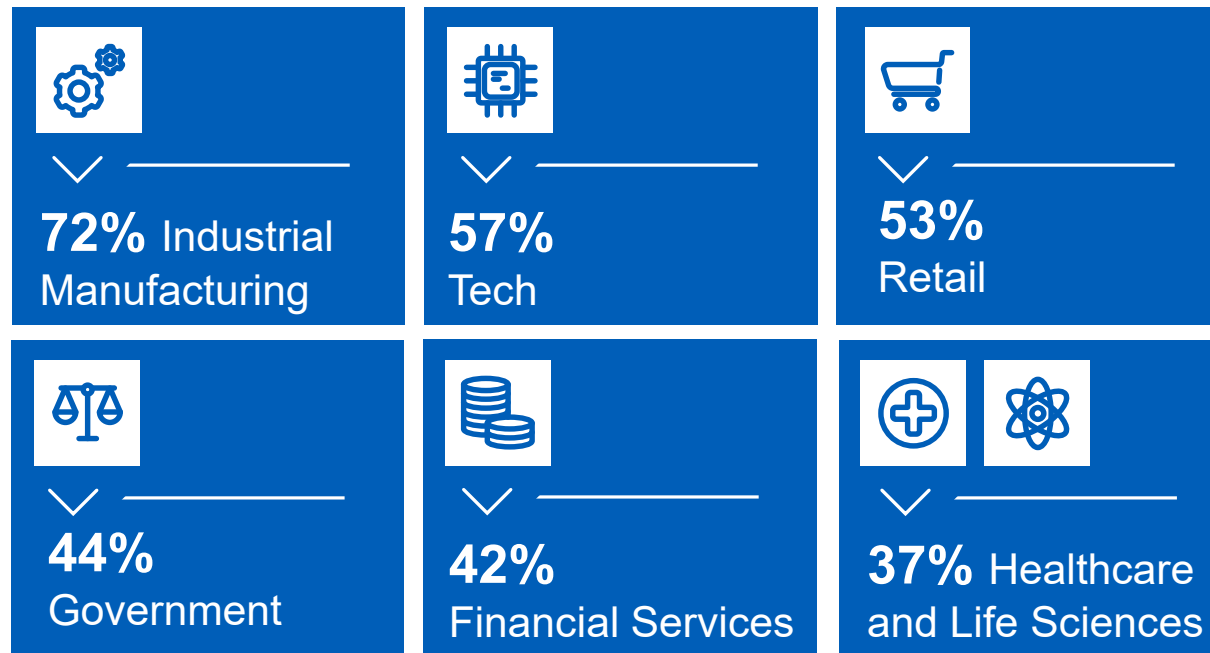
Many business leaders say their organization accelerated AI adoption during the pandemic and credit the technology in their response


 Chart 4: COVID-19 influenced AI implementation and sped the pace of adoption.

How has COVID-19 influenced your company's plans to implement AI?
 - Sped up my company's pace of adoption.


Base: Interested in Implementing AI Technology (Tech n=150, Retail n=149, Financial Services n=149, Industrial Manufacturing n=150, Healthcare and Life Sciences n=198, Government n=147)

*Due to reduced base sizes for this question, Healthcare and Life Sciences respondents were combined to bolster the sample.





Industry respondents from **small companies (88%)** are more likely than industry respondents from **large companies (80%)** to say **AI technology** helped their company during the **COVID-19** outbreak.



Source: KPMG 2021 *Thriving in an AI World* survey across 7 industries



| Portrayals & perceptions of AI

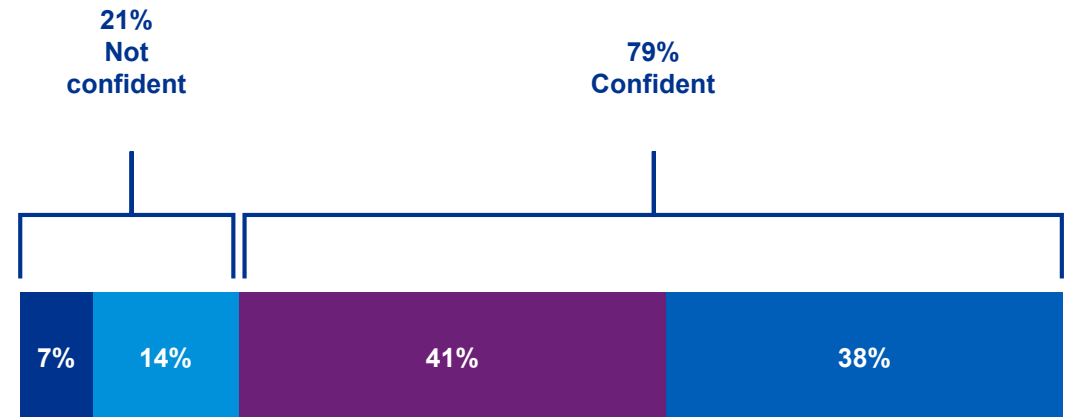
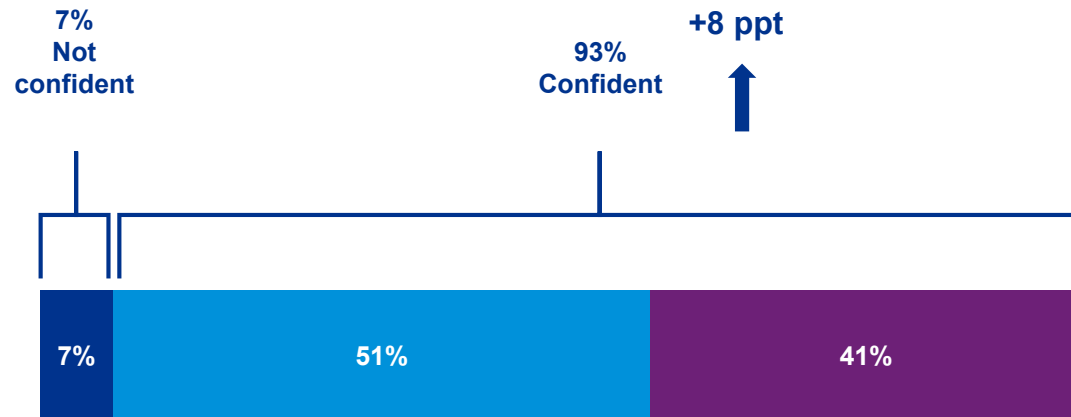
Confidence in AI to help solve major industry problems is high among business leaders and government decision-makers



Business leaders are confident in AI's ability to detect fraud in the financial services industry.



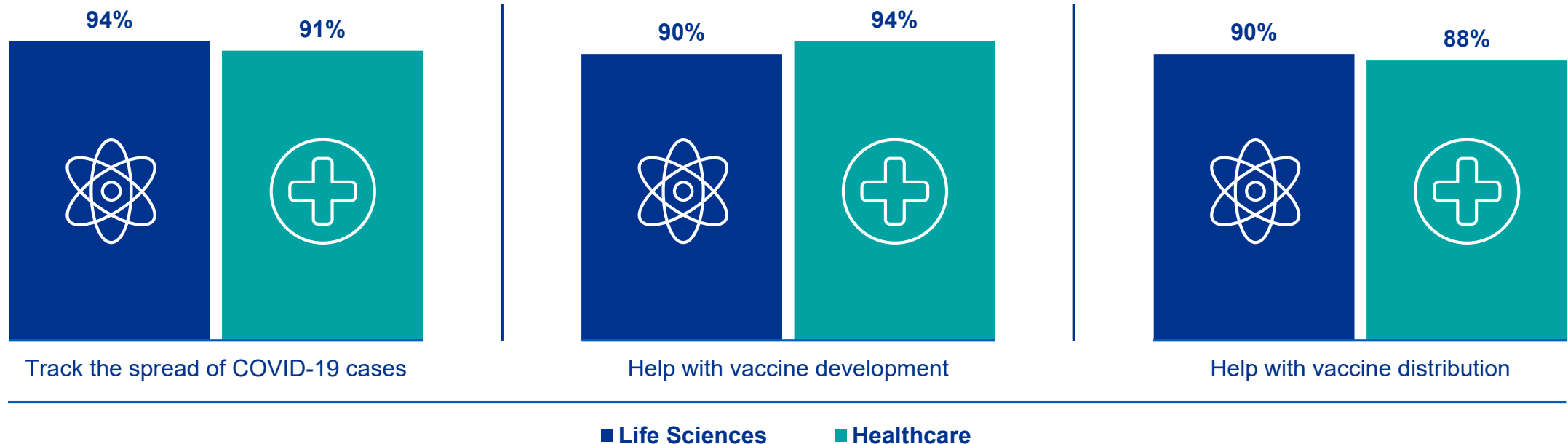
Government decision-makers are confident in AI's ability to improve bureaucratic efficiency.



Respondents in the life sciences and healthcare industries are confident in AI's ability to both monitor the spread of Covid-19 and vaccine development and distribution



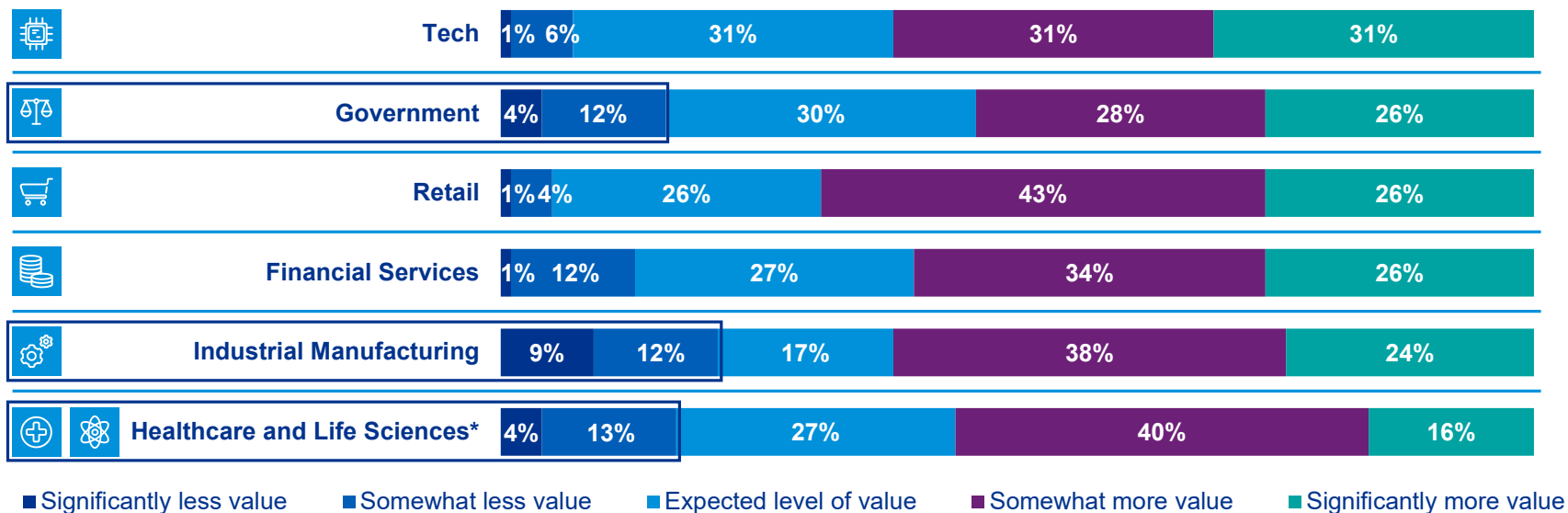
> Chart 5: Level of confidence in AI's ability to combat coronavirus.



Source: KPMG 2021 *Thriving in an AI World* survey across 7 industries

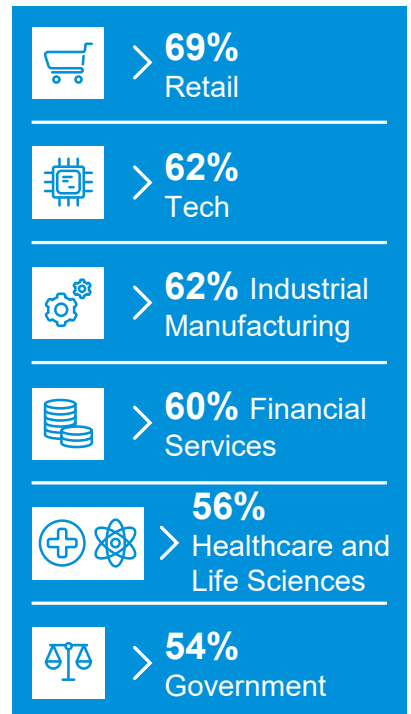
Most business leaders whose organizations have AI initiatives say the technology added more value, but respondents in the Healthcare/Life Sciences, Industrial Manufacturing, and Government industries may be struggling to recognize its full potential

Compared to promised value, AI initiatives at their organization have delivered ___ value
 [Asked among those whose organization has functional/limited/pilot AI capabilities at their organization]



*Due to reduced base sizes for this question, Healthcare and Life Sciences respondents were combined to bolster the sample (Tech n=147, Retail n=144, Financial Services n=146, Industrial Manufacturing n=150, Healthcare and Life Sciences n=191, Government n=134).

More value summary



Lower levels of management and large companies with AI initiatives are less likely to say they see the value AI has delivered at their organization



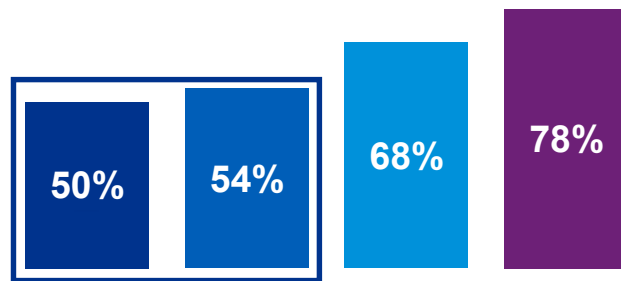
Managers and directors are struggling to see the value AI initiatives have delivered compared to higher levels....



...and respondents at large companies are struggling to see the value AI initiatives have delivered compared to those at small companies.

By job level

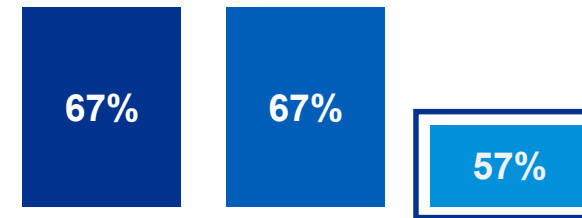
■ Managers ■ Directors ■ VP/SVP ■ C-Suite Executives



Say AI initiatives at their organization have delivered more value

By company size

■ Small ■ Medium ■ Large

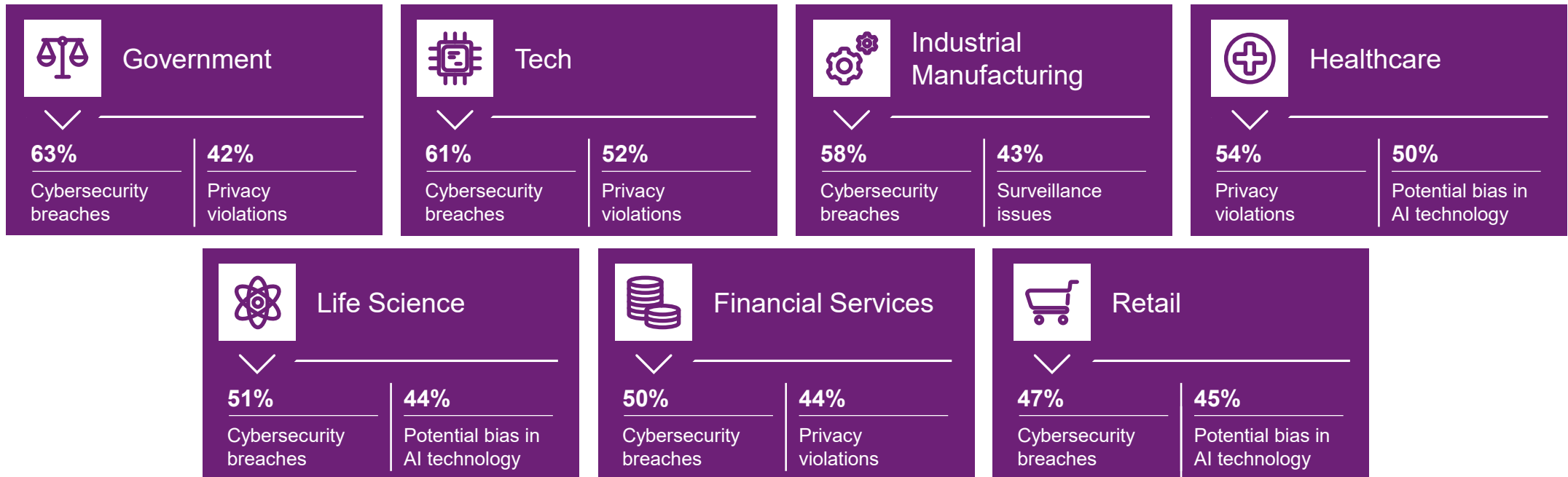


Say AI initiatives at their organization have delivered more value

Governance, privacy & ethics








Cybersecurity breaches are the greatest potential risk of AI adoption for industry respondents, with healthcare respondents viewing privacy violations as the greatest potential risk

Chart 8: The top two potential risks for AI per industry.



Source: KPMG 2021 *Thriving in an AI World* survey across 7 industries

Moreover, threats to security and privacy are a particular ethical concern to industry respondents; however, this concern has fallen from 2019. Concerns about the concentration of wealth around companies using AI technology is growing

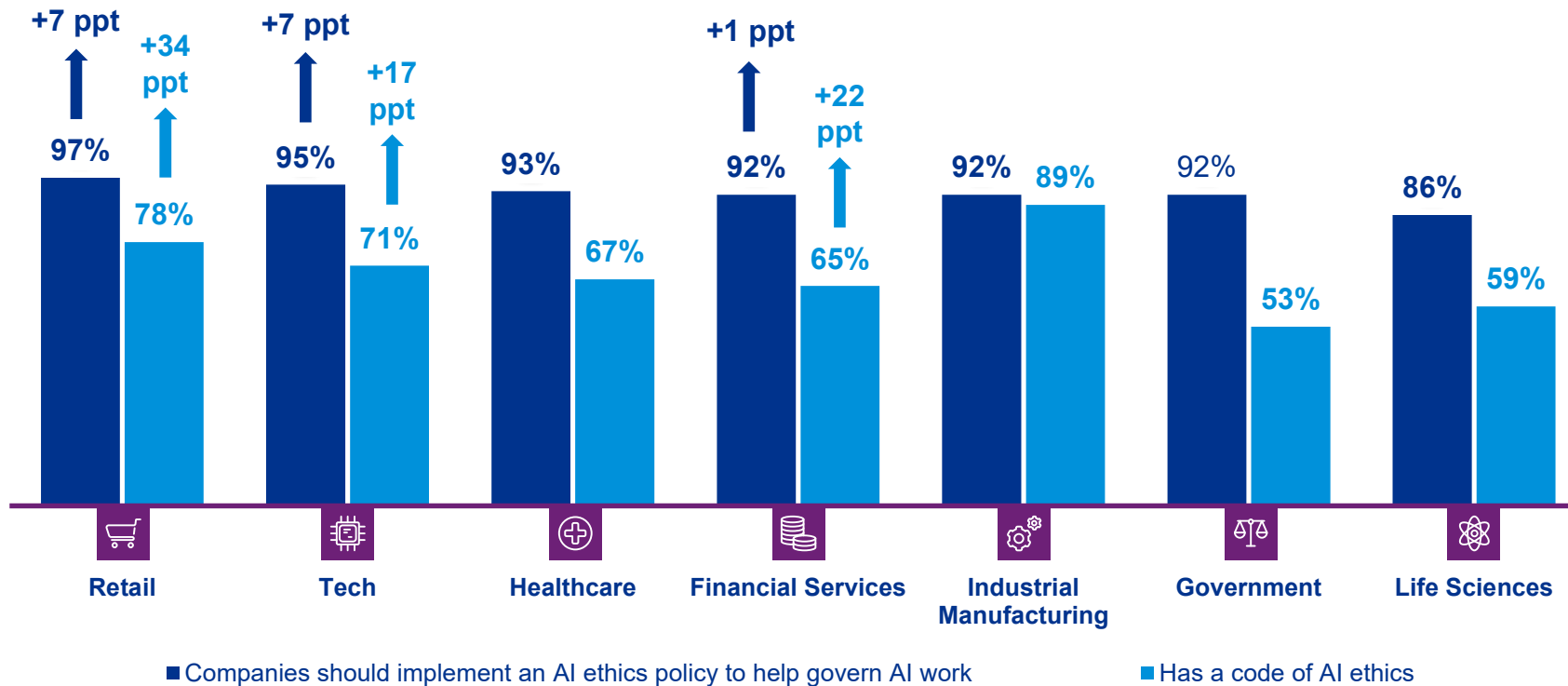
Ethical Concerns Regarding AI Technology							
	 Industrial Manufacturing	 Tech	 Government	 Healthcare	 Life Sciences	 Retail	 Financial Services
Threats to security and privacy	59%	55% ↓ -4 ppt	54%	52%	51%	49% ↓ -12 ppt	49% ↓ -23 ppt
Safety issues	55%	40% ↑ +1 ppt	33%	45%	39%	35% No change	27% ↓ -6 ppt
Machine bias issues	43%	29% ↓ -22 ppt	32%	35%	32%	46% ↑ +14 ppt	32% ↓ -8 ppt
A loss of personal interaction or humanistic approach	31%	37% ↓ -6 ppt	33%	28%	32%	41% ↓ -18 ppt	42% ↓ -9 ppt
Potential for AI takeover by malicious entities	39%	37% ↓ -6 ppt	34%	35%	37%	25% ↓ -11 ppt	38% ↑ +1 ppt
Concentration of wealth around companies using AI technology	29%	33% ↑ +11 ppt	26%	27%	39%	29% ↑ +14 ppt	33% ↑ +8 ppt
Loss of jobs	22%	26% ↓ -14 ppt	27%	14%	32%	37% ↓ -25 ppt	28% ↓ -14 ppt

 Indicates when an industry response is statistically significant compared to total industry respondents.

Source: KPMG 2021 *Thriving in an AI World* survey across 7 industries

Business leaders and government decision-makers agree companies should implement an AI ethics policy, yet not all organizations currently have one

Chart 9: Statements agreed with about AI ethics and code of ethics.



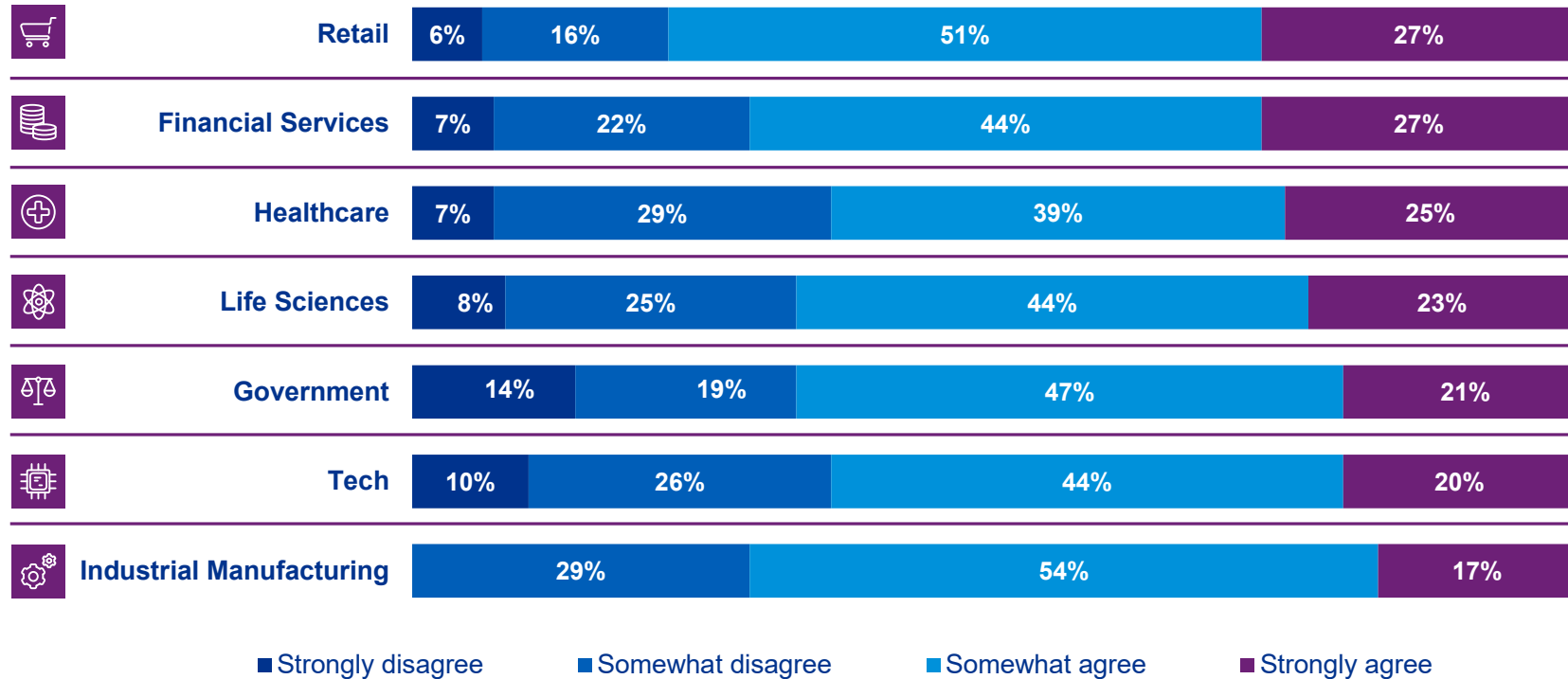
82%
 75%
 64%

Industry respondents from **small (82%)** and **medium (75%)** companies are more likely to say their company currently has a **code of AI ethics**, compared to **64%** of large companies.

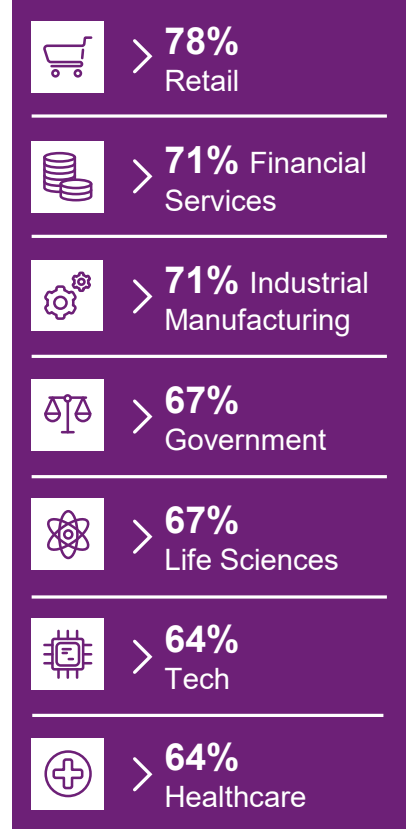
Source: KPMG 2021 *Thriving in an AI World* survey across 7 industries

In addition to ethical concerns and risks, industry respondents say it's difficult to stay on top of constantly evolving AI offerings

Chart 10: Level of agreement that it is hard to keep up with the evolving AI landscape.



Total agree summary

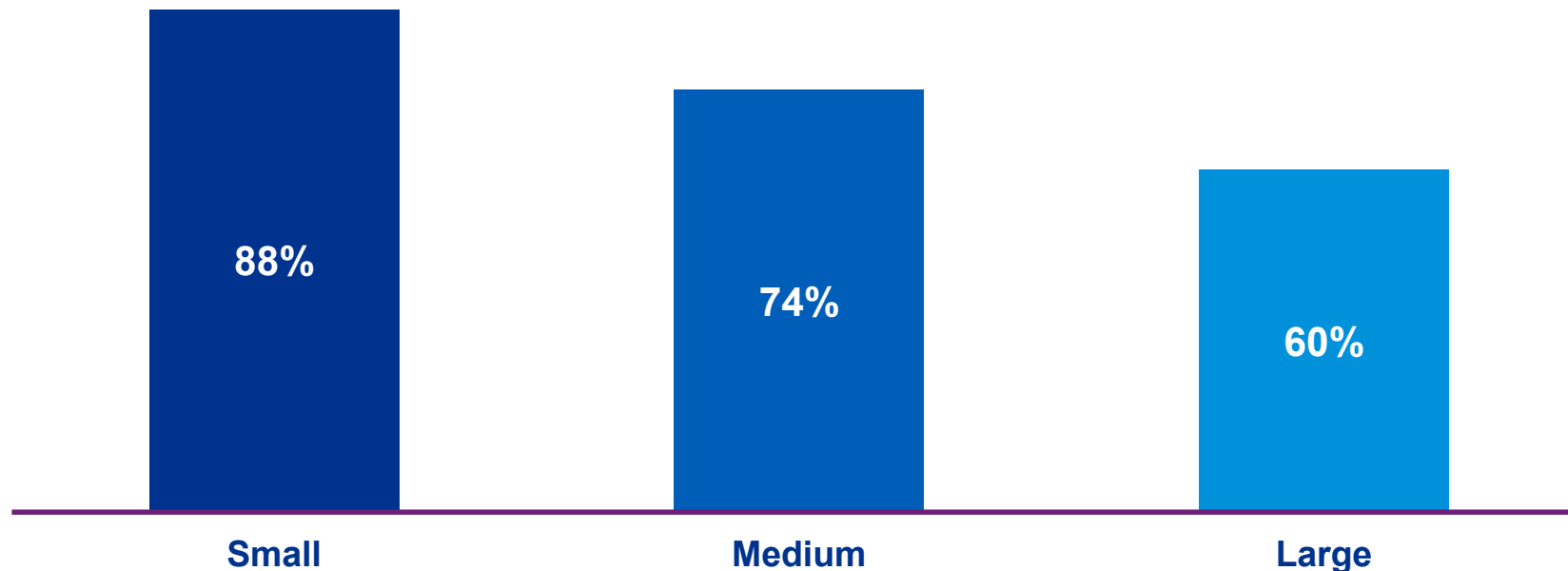


Source: KPMG 2021 *Thriving in an AI World* survey across 7 industries



Business leaders also say they struggle to select the best AI technologies; those from small companies are more likely to struggle

Agree their company struggles to select the best AI technologies.



Total agree summary by industry

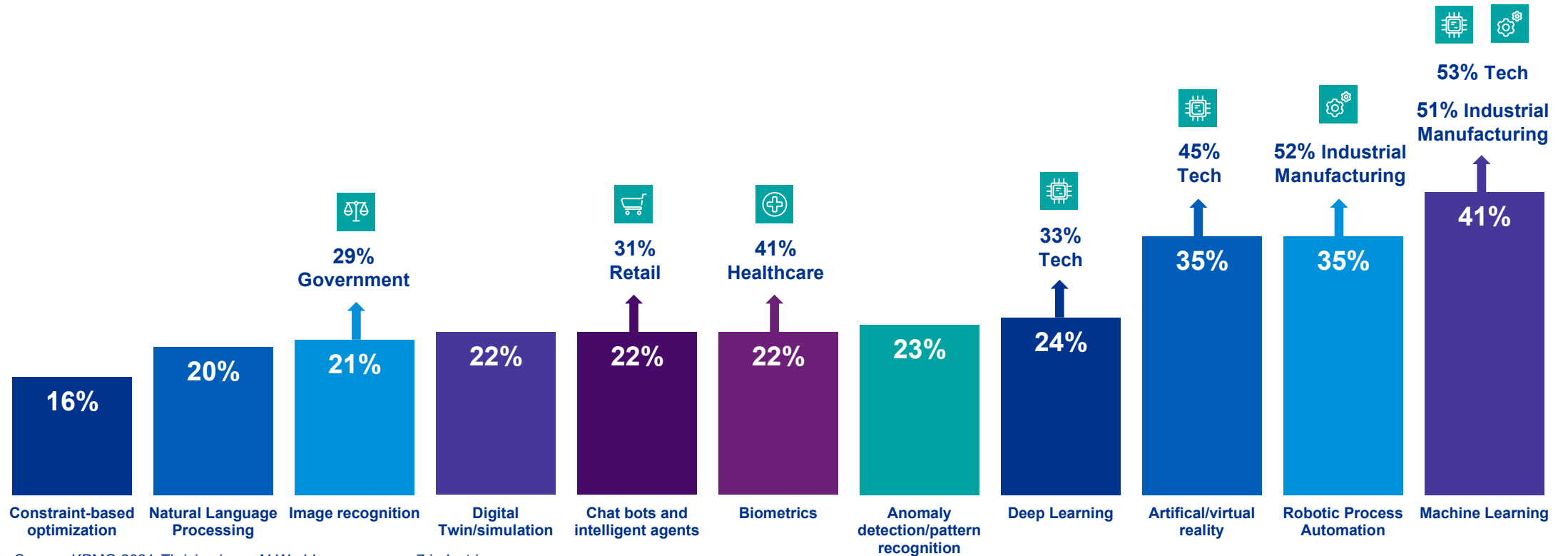


Source: KPMG 2021 *Thriving in an AI World* survey across 7 industries
(Base: Small company n=139; Medium company n=211; Large company n=600)

Reflections for the future

Business leaders believe machine learning will have the greatest impact on their respective industries

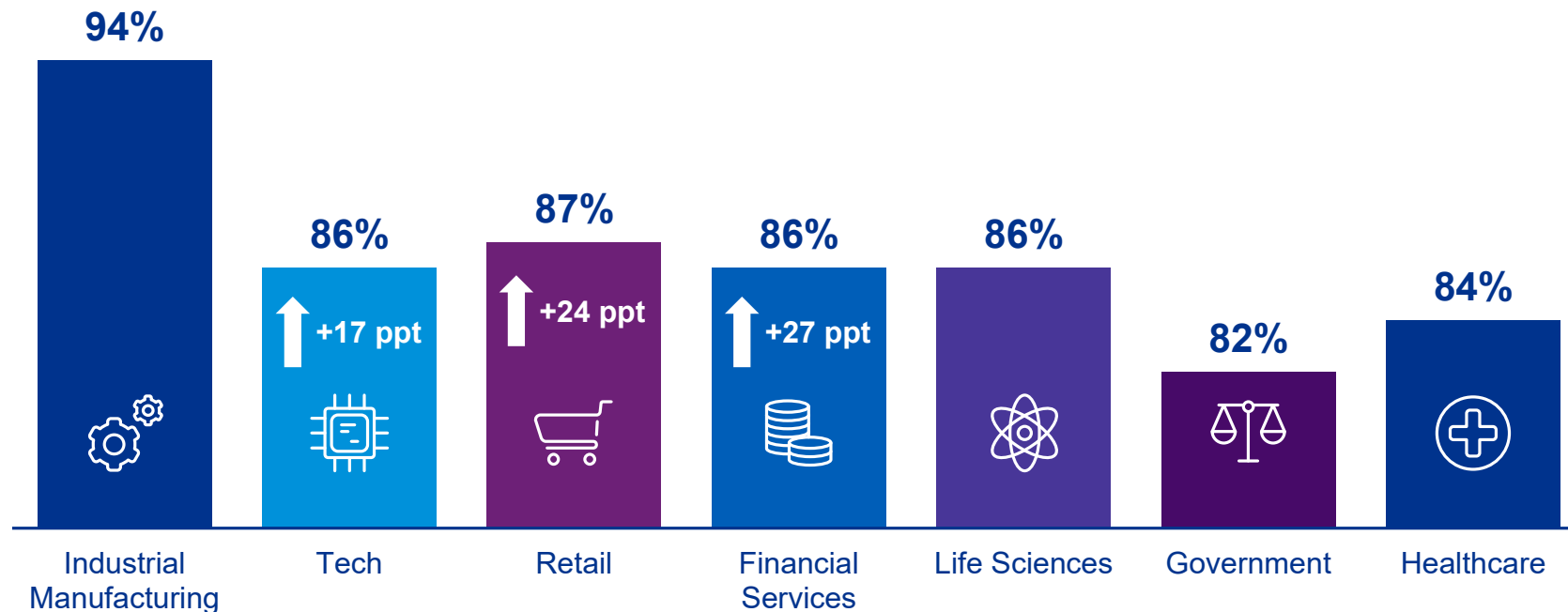
Chart 11: AI technologies that will have the greatest impact across industries (asked of total industry respondents).



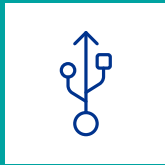
Source: KPMG 2021 *Thriving in an AI World* survey across 7 industries

Government has a role to play in regulating AI, with more retail, financial services, and technology respondents interested in government involvement now than in 2019

Chart 12: Believe government should be involved in regulating AI technology.



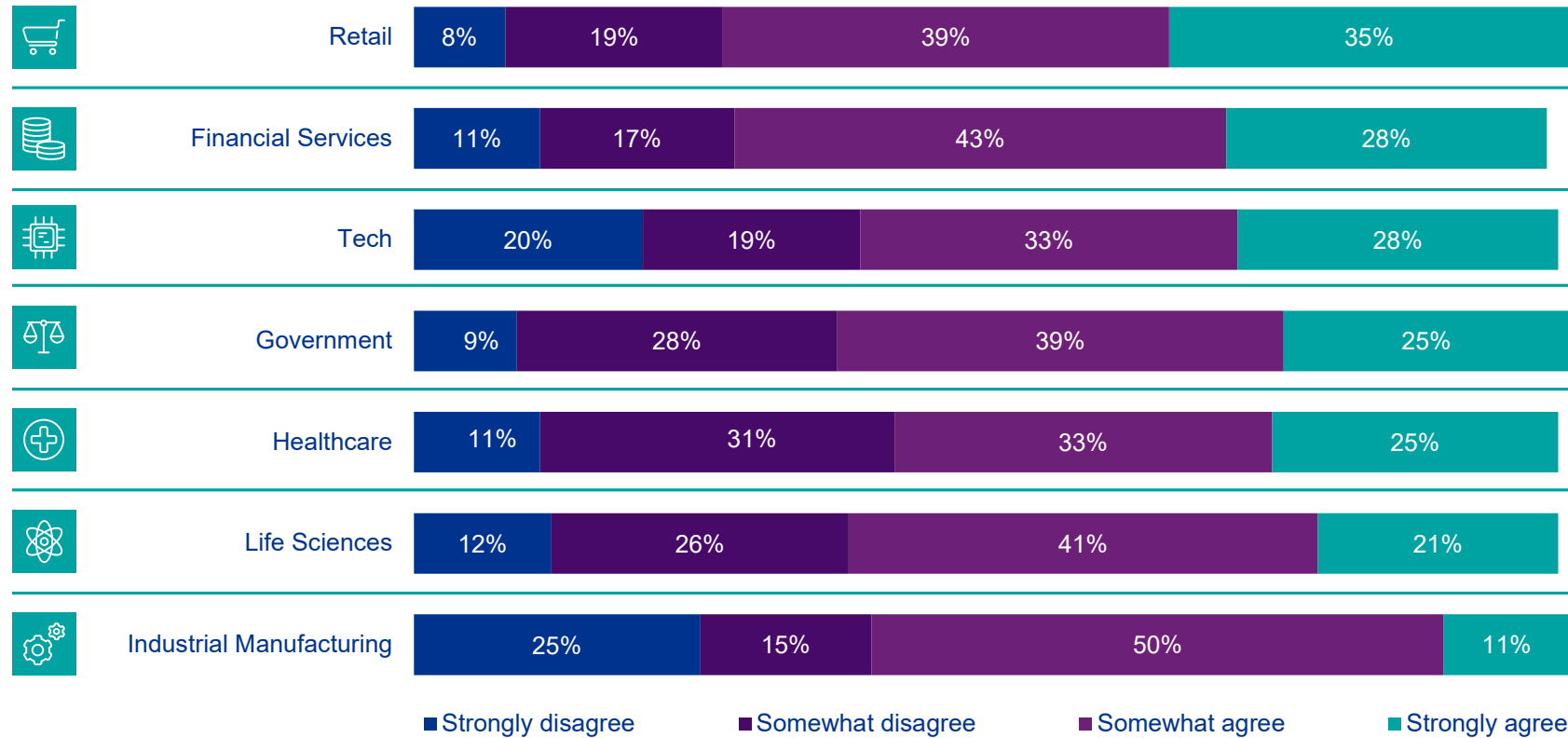
Source: KPMG 2021 *Thriving in an AI World* survey across 7 industries



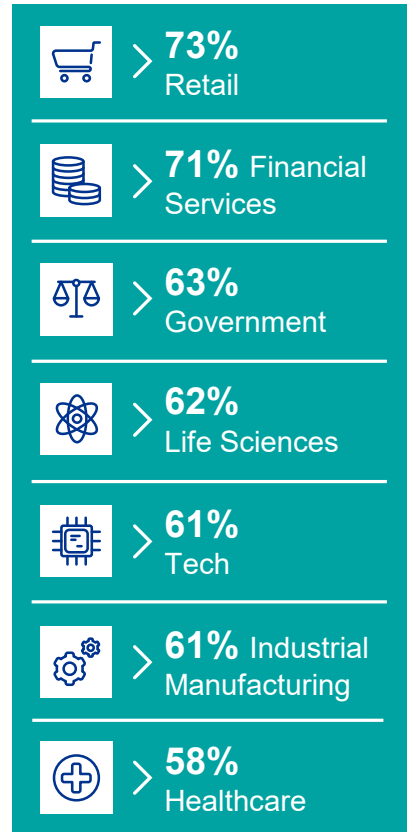
Industry respondents with high AI knowledge (92%) are more likely than total industry respondents (87%) to say the government should be involved in regulating AI technology.

Despite feeling like things are moving too fast, business leaders believe the US is behind in adoption AI

Chart 13: Level of agreement that compared to other countries, the US is behind in terms of AI adoption.



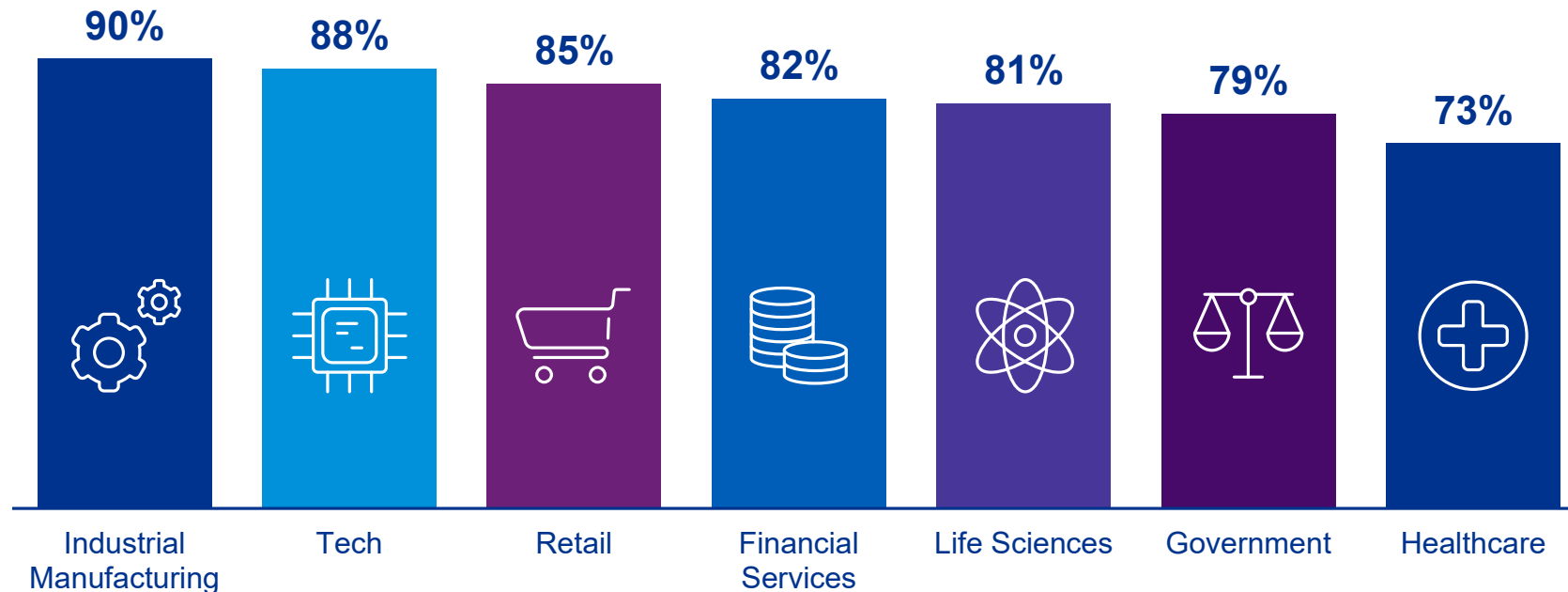
Total agree summary



Source: KPMG 2021 *Thriving in an AI World* survey across 7 industries

Respondents believe the Biden administration will do more to help advance the adoption of AI, with younger industry respondents feeling more optimistic of the new administration


Chart 14: Business leaders believe the new administration will help advance AI adoption.



Source: KPMG 2021 *Thriving in an AI World* survey across 7 industries



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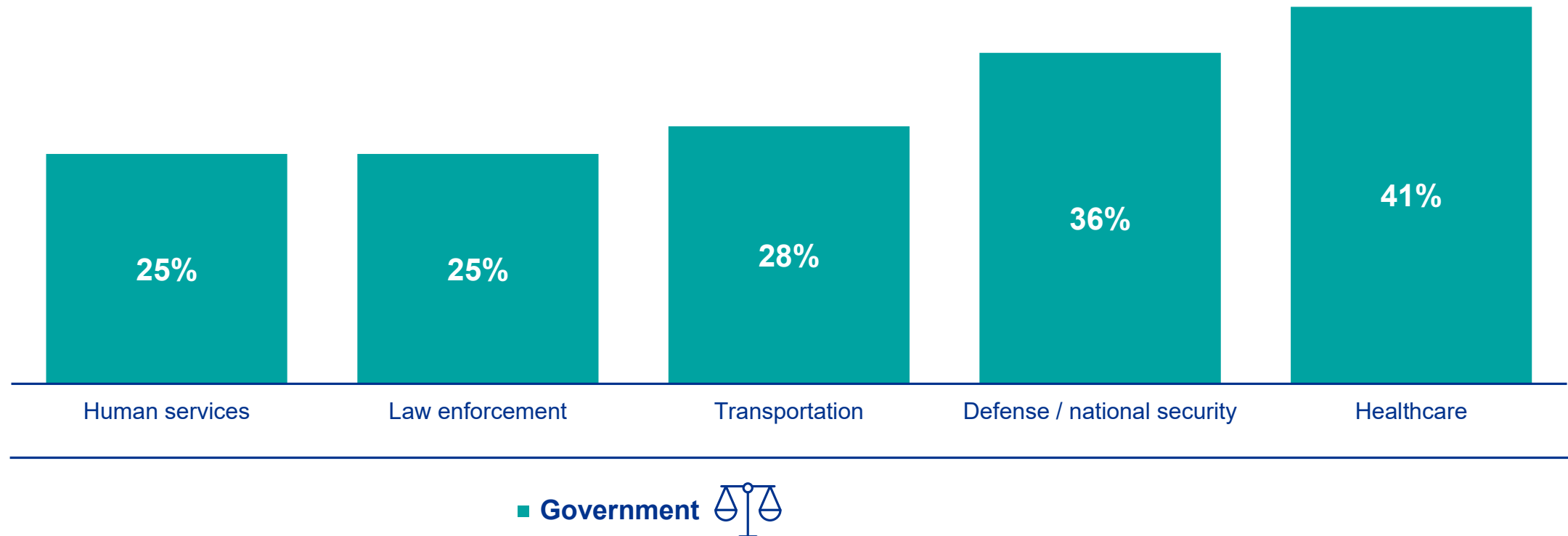


Younger (Gen Z and Millennial) industry respondents are more likely than older (Gen X and Baby Boomer) industry respondents to be more optimistic of the potential actions the Biden administration will do to help advance the adoption of AI in enterprise (90% vs. 79%).

Government decision-makers want to see the Biden administration increase AI's role in healthcare over the next four years



Chart 15: Top five areas of interest for government to increase the role of AI over the next four years.



Source: KPMG 2021 *Thriving in an AI World* survey across 7 industries



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| Overview & methodology

Overview & Methodology

To support media relations and content development efforts for KPMG around artificial intelligence (AI), Ketchum conducted a survey assessing the perceptions of AI technology as it relates to seven specific industries: healthcare, Financial Services, retail, technology, industrial manufacturing, life sciences and government/public sector. By targeting decision makers in these respective verticals, the survey uncovered pain points, perceived risks and challenges of large companies in the U.S. related to artificial intelligence.

2019 (n=751)			2021 (n=950)		
The online survey was fielded between September 3 rd , 2019 and September 16 th , 2019. The margin of error (MOE) for the total sample at the 95% confidence level is +/- 3.58 percentage points.			The online survey was fielded between January 3 rd , 2021 and January 16 th , 2021. The margin of error (MOE) for the total sample at the 95% confidence level is +/- 3.2 percentage points.		
Industry	#	Audience Criteria	Industry	#	Audience Criteria
^Tech	150	Business decision makers (manager level and above) Full time employees With at least a moderate amount of AI knowledge Companies with revenue of \$1b plus At least 51 employees	^Tech	150	Business decision makers (manager level and above) Full time employees With at least a moderate amount of AI knowledge Companies with revenue of \$1b plus At least 51 employees
Healthcare*	150		^Retail	150	
^Retail	151		^Financial Services	150	
^Financial Services	150		Industrial Manufacturing	150	
Transportation	150	Business decision makers (manager level and above) with the exception of 6 analysts/associates Full time employees With at least a moderate amount of AI knowledge Companies with revenue of \$250M plus At least 51 employees	Healthcare*	100	Business decision makers (manager level and above) Full time employees With at least a moderate amount of AI knowledge Companies with revenue of \$100M plus At least 51 employees
			Life Sciences*	100	IT decision makers (manager level and above) Full time employees With at least a moderate amount of AI knowledge At least 51 employees
			Government	150	

^NOTE: Only Tech, Retail and Financial Services are comparable from 2019 to 2021.

***NOTE:** Healthcare and Life Sciences will not be comparable to 2019 survey since they are now split, and the audience criteria shifted to accommodate the change.



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