



Are You Overestimating Your Responsible AI Maturity?

RESPONSIBLE AI SURVEY 2021

March 2021

The 2021 survey

To assess organizations' progress in implementing a responsible artificial intelligence (RAI) program, BCG collected and analyzed data from senior executives at more than 1,000 large organizations

These executives are directly involved with AI, and the organizations operate in six regions and nine major industries

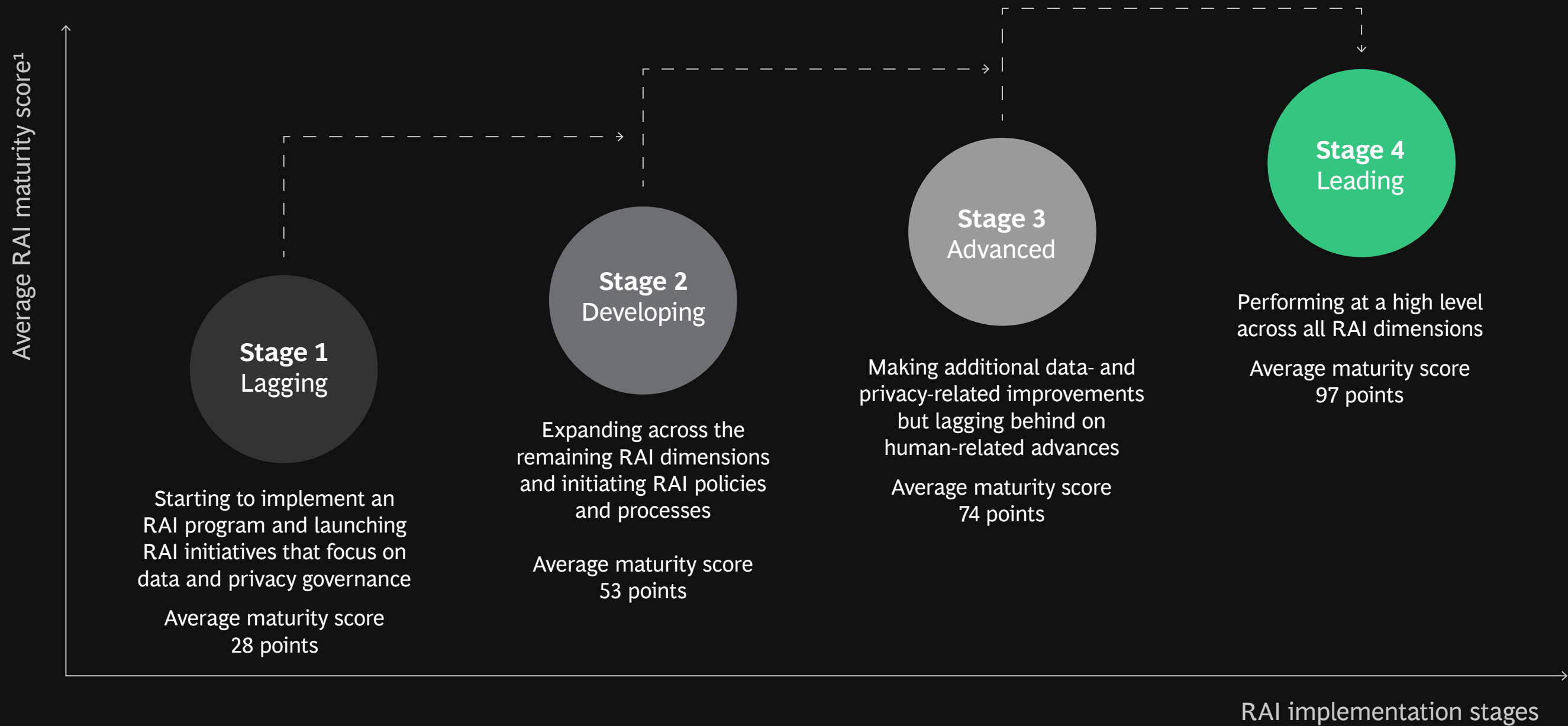


TWO KEY FINDINGS

Almost half of the organizations that reported having a mature implementation of an RAI program are, in reality, lagging behind

Less than half of the organizations that reported reaching AI at scale have a fully mature RAI program

Four distinct RAI stages define an organization's path to maturity



Source: BCG's Responsible AI Survey 2021.

Note: n = 1,034. RAI = responsible artificial intelligence. RAI dimensions offer a guide to developing and implementing AI systems in a responsible way.

¹An organization's RAI maturity score is the average of all its dimension-specific scores. An organization's dimension-specific score (0–100) is the average of its responses to 21 questions about its implementation across generally accepted RAI dimensions. Across all organizations, the average dimension-specific score is 65.

Data and privacy governance tends to be the most mature dimension across the four stages

Average maturity score for each RAI dimension¹



OUR PERSPECTIVE

These are logical findings, given that regulations or policies often mandate a focus on data and privacy

Fairness and equity as well as human plus AI are the most difficult to address, and investment in these areas often lags behind

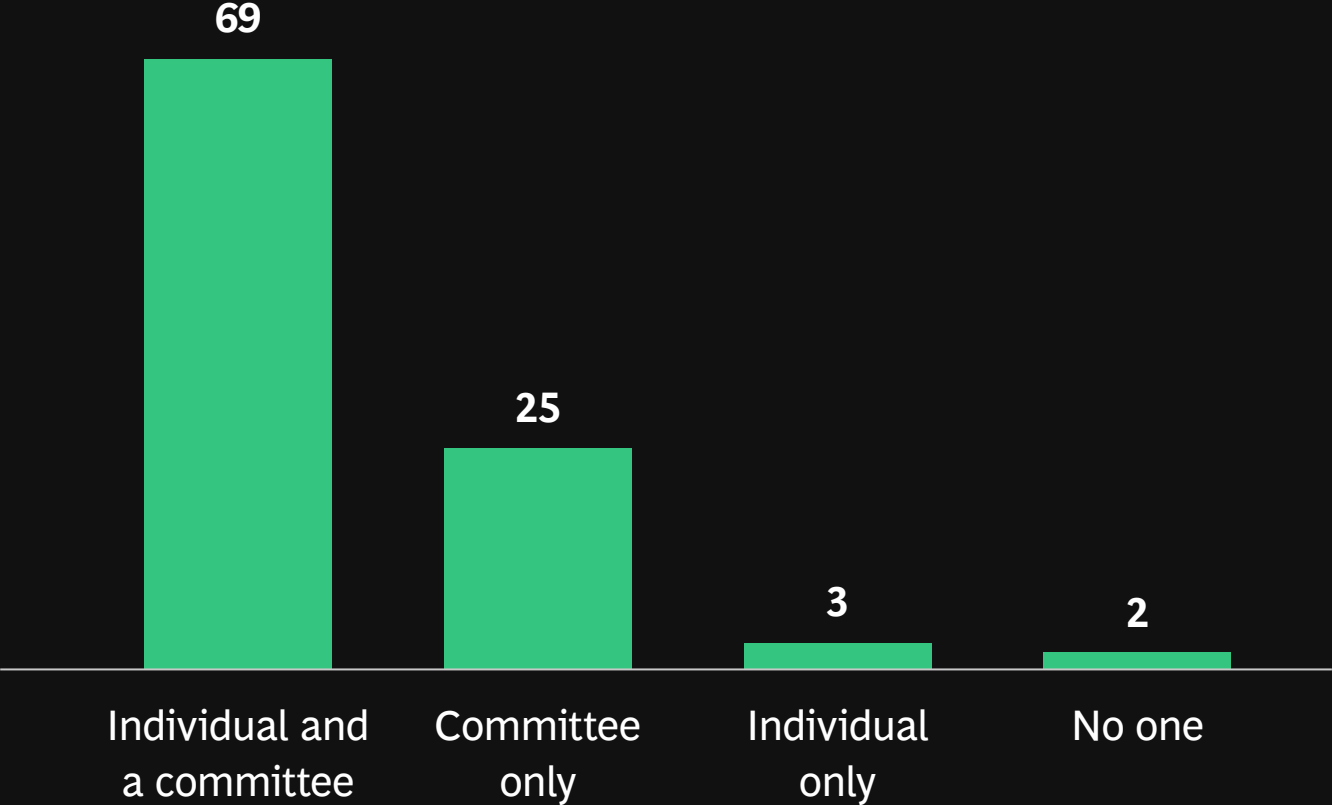
Source: BCG’s Responsible AI Survey 2021.

Note: n = 1,034. RAI = responsible artificial intelligence.

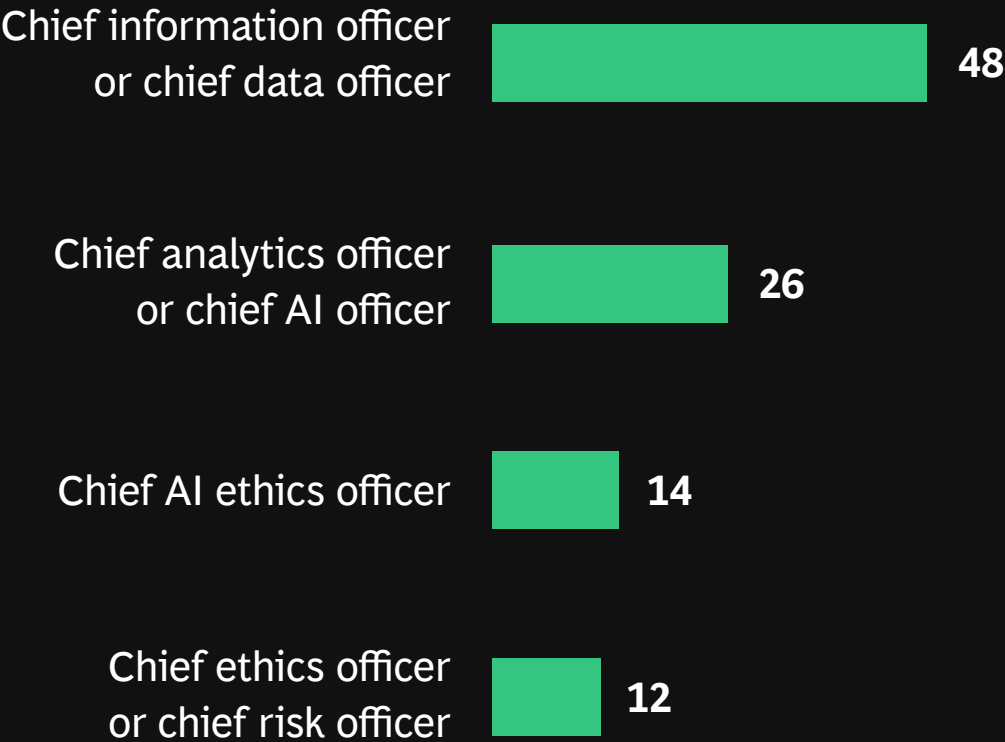
¹Each dimension-specific score (0–100) is the average of all responses to the corresponding dimension-specific questions.

Among leading organizations, a majority have both an individual and a committee guiding RAI strategy

Organizations in the leading stage of maturity (%)



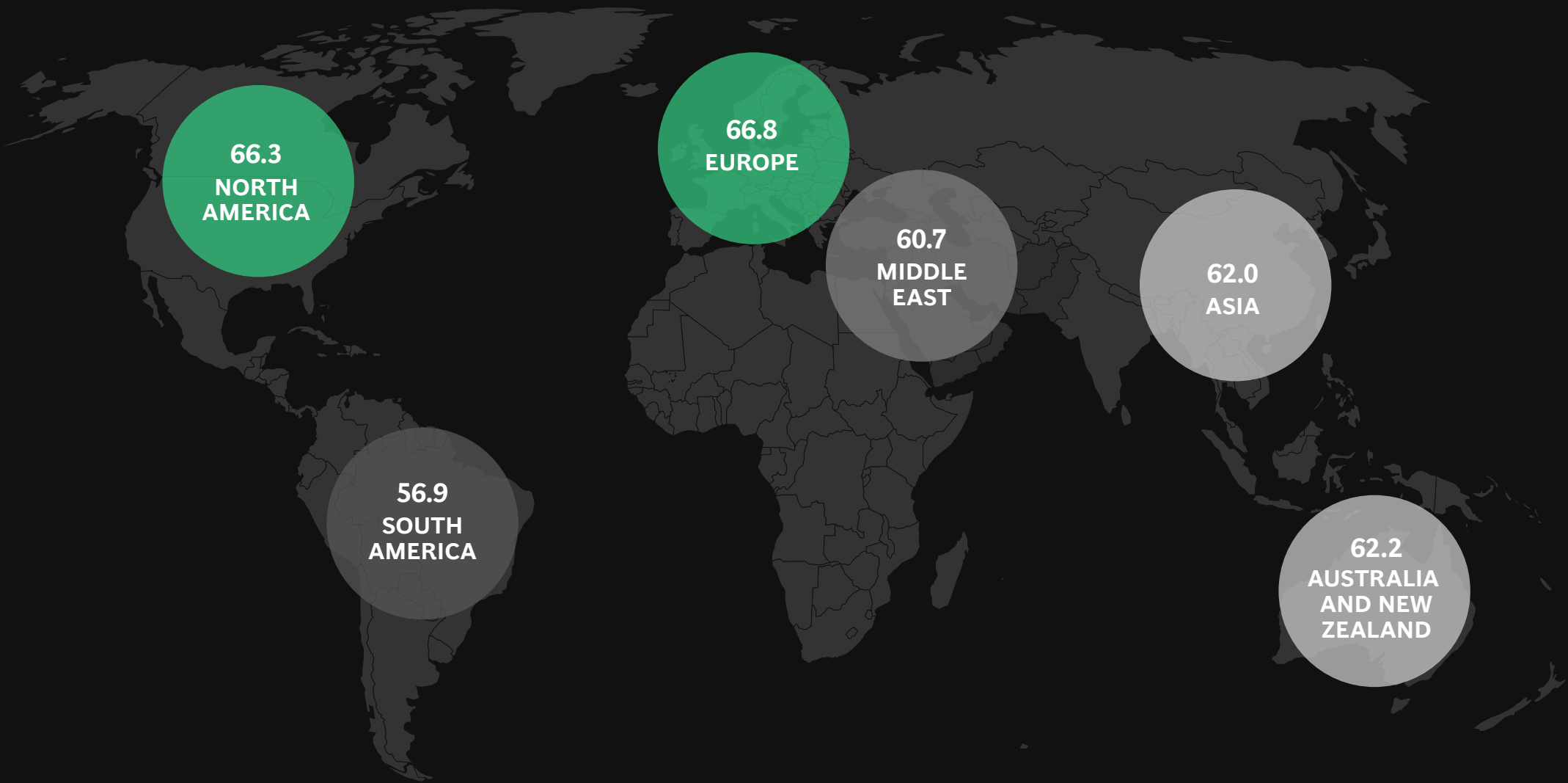
Title of individual (%)



Source: BCG's Responsible AI Survey 2021.
Note: n = 1,034. RAI = responsible artificial intelligence. Because of rounding, not all percentages add up to 100.

Organizations in Europe and North America have the highest RAI maturity

Average RAI maturity score¹



OUR PERSPECTIVE

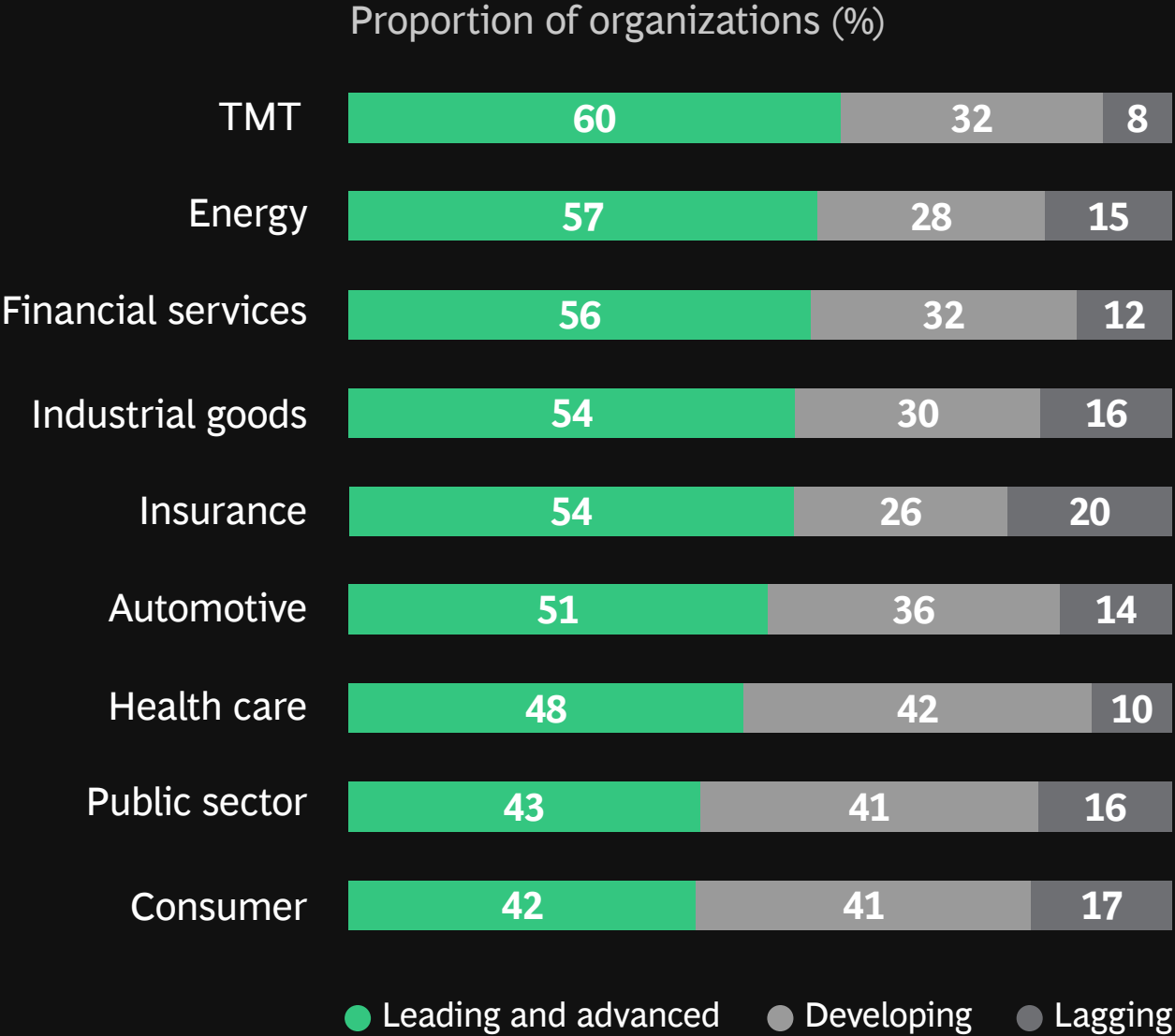
Our findings indicate that an organization's region is a better predictor of overall maturity than its industry

Source: BCG's Responsible AI Survey 2021.

Note: n = 800. RAI = responsible artificial intelligence.

¹The average RAI maturity score for each region is the average of the dimension-specific scores (0–100) for all organizations in the region. An organization's dimension-specific score is the average of its responses to 21 questions about its implementation across generally accepted RAI dimensions. Outliers from Brazil, Canada, China, Japan, and India were excluded. Across all responses (1,034), the average dimension-specific score for all organizations is 65.

The differences in RAI maturity among industries are not statistically significant, but some observations are worth noting



OUR PERSPECTIVE

As expected, TMT is a leader, with several exemplar companies

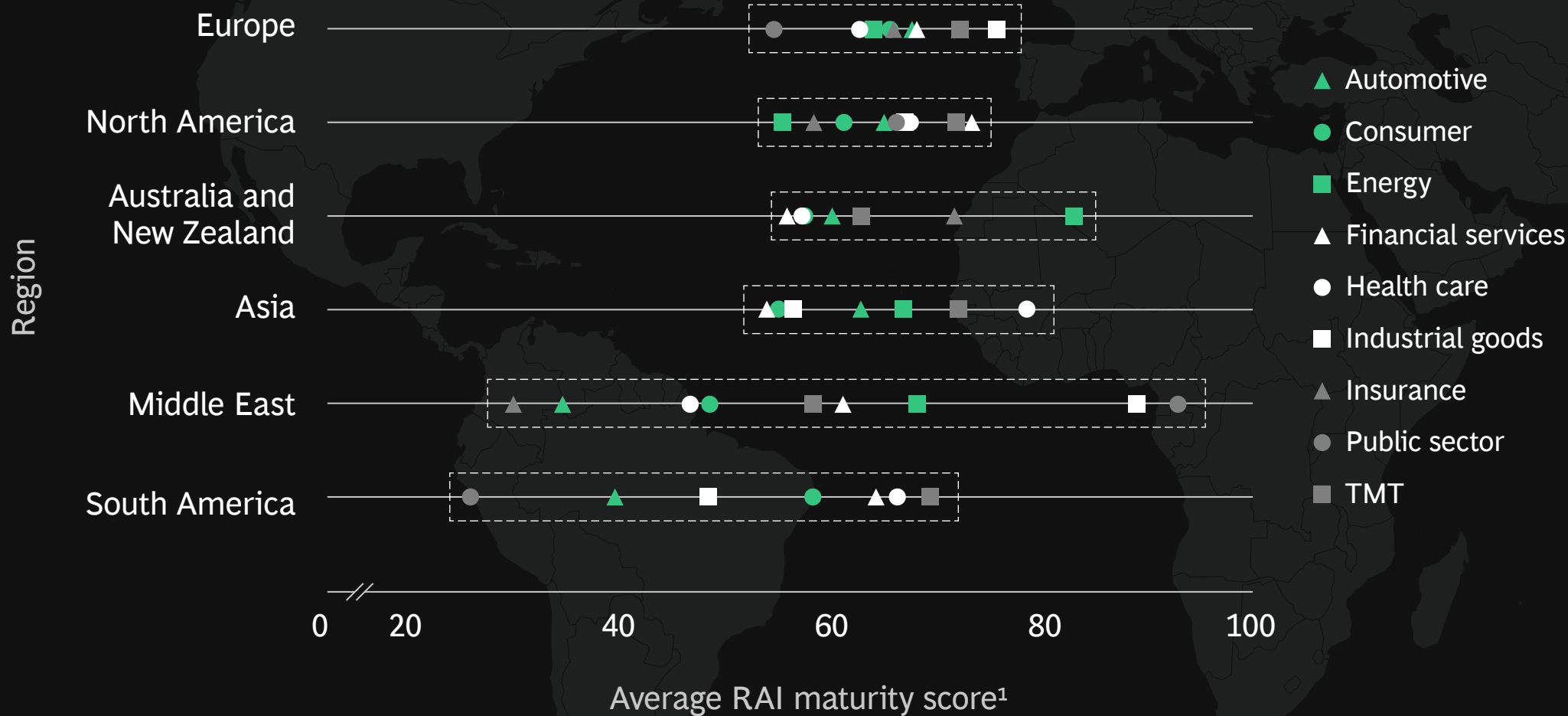
The financial services and health care industries are heavily regulated and have a history of strong compliance and risk management, so their pursuit of RAI is unsurprising

Of the remaining industries, a focus on RAI seems to track the relative degree of human and societal impact that is inherent to the industry’s use cases:

- Industrial goods and automotive are more mature than expected; AI applications tend to be focused on business operations or B2B transactions, which are simpler to implement
- The consumer industry is less mature than expected because of the complexity of issues that arise in customer-centric use cases

Source: BCG’s Responsible AI Survey 2021.
 Note: RAI = responsible artificial intelligence. TMT = technology, media, and telecommunications. Because of rounding, not all percentages add up to 100.

Each industry's RAI maturity varies by region



OUR PERSPECTIVE

Some regions are clearly more mature, on average, and the variation among industries is greater within less mature regions

The industries that lead in some regions lag in others, which helps explain the lack of statistically significant differences among industries

Source: BCG's Responsible AI Survey 2021.

Note: n = 800. RAI = responsible artificial intelligence. TMT = technology, media, and telecommunications.

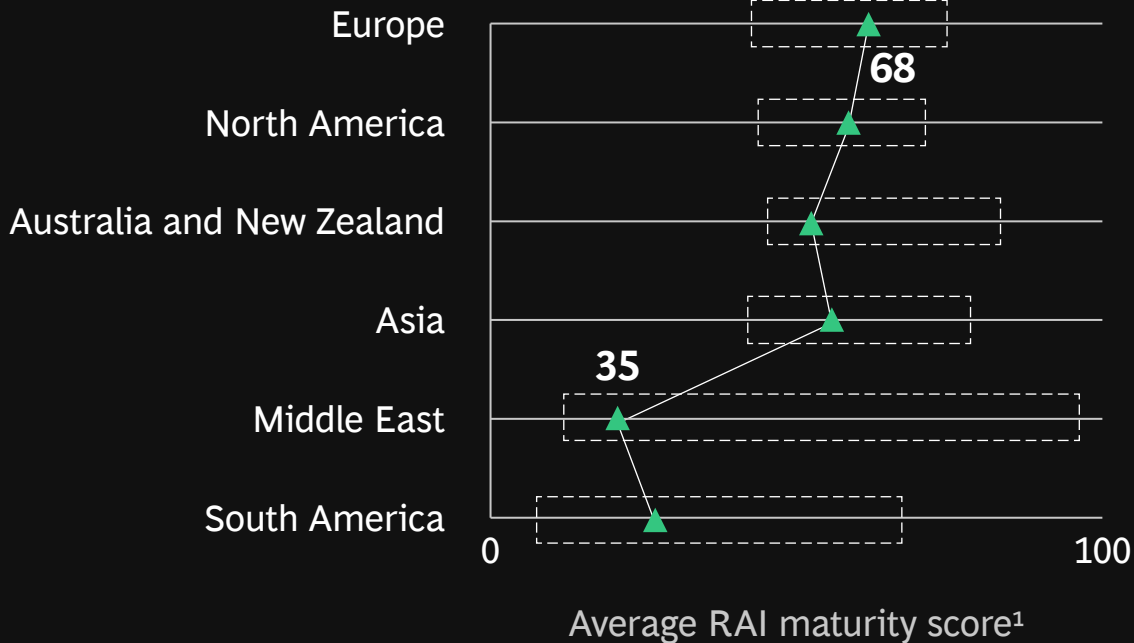
¹The average RAI maturity score for each industry is the average of the dimension-specific scores (0–100) for all organizations in the industry. An organization's dimension-specific score is the average of its responses to 21 questions about its implementation across generally accepted RAI dimensions. Outliers from Brazil, Canada, China, Japan, and India were excluded. The sample size was relatively small for industries in Asia, the Middle East, and South America.

Industries fit into one of three archetypes when classified by their average maturity across regions

HIGH VARIABILITY

Automotive

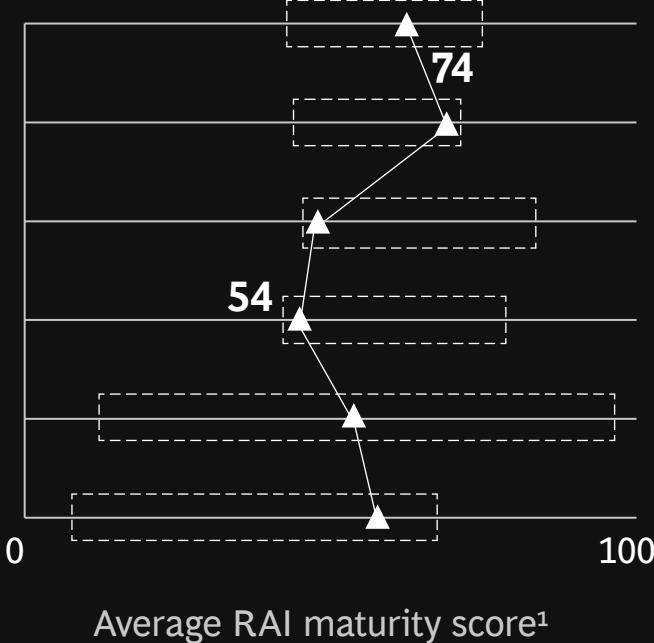
Organizations that are based in the Middle East and South America are significantly less mature in RAI



MODERATE VARIABILITY

Financial services

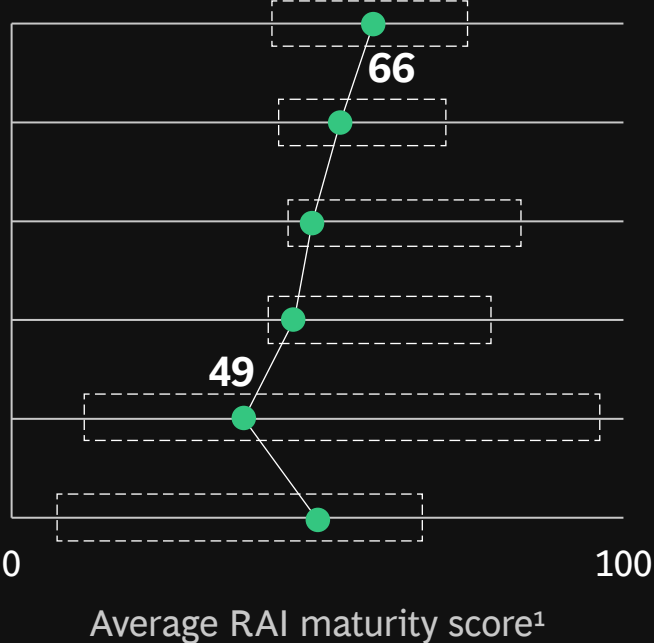
Institutions in North America are generally more mature, on average, while those in Asia trail behind



LOW VARIABILITY

Consumer

The maturity of consumer organizations varies by region, but the differences are relatively small



Source: BCG's Responsible AI Survey 2021.

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Organizations often perceive that their RAI maturity is higher than it is



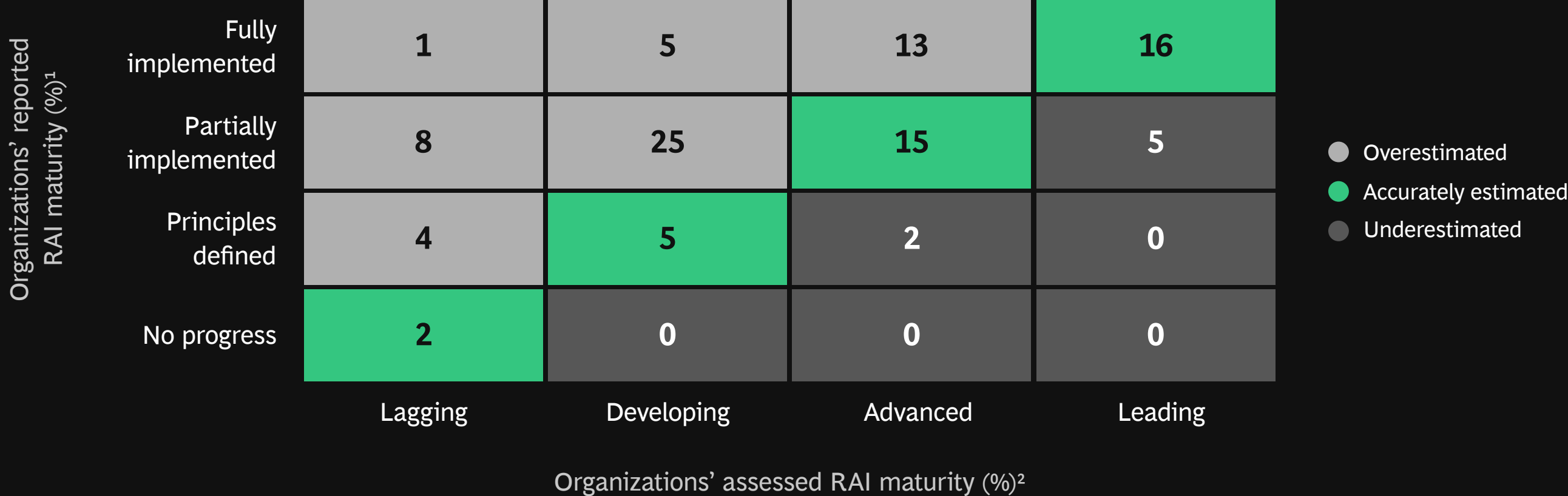
55%

Organizations that are overconfident about their RAI maturity¹

Source: BCG's Responsible AI Survey 2021.
Note: n = 1,034. RAI = responsible artificial intelligence.
¹Based on organizations' responses to 21 questions about their implementation across generally accepted RAI dimensions.

The gap between perception and reality exists at almost every stage of RAI maturity

RAI MATURITY-PERCEPTION GAP MATRIX



Source: BCG's Responsible AI Survey 2021.

Note: n = 1,034. RAI = responsible artificial intelligence. Because of rounding, not all percentages add up to 100.

¹Survey question: How would you define your organization's progress on its responsible AI journey? Answers: fully implemented, partially implemented, principles defined, or no progress.

²The RAI maturity score for each organization is the average of dimension-specific scores (0-100). An organization's dimension-specific score is the average of its responses to 21 questions about its implementation across generally accepted RAI dimensions.

Even organizations that think they have fully implemented an RAI program often have not

35% of respondents reported that an RAI program had been fully implemented



46%

Those respondents who accurately estimated their organization's progress

54%

Those respondents who overestimated their organization's progress¹

Source: BCG's Responsible AI Survey 2021.

Note: n = 1,034. RAI = responsible artificial intelligence. Because of rounding, not all percentages add up to 100.

¹Based on organizations' responses to 21 questions about their implementation across generally accepted RAI dimensions.

More than half of the organizations that reported achieving AI at scale have not fully implemented an RAI program

Some respondents—26%—reported using AI at scale...



...but only 12% have fully implemented an RAI program¹

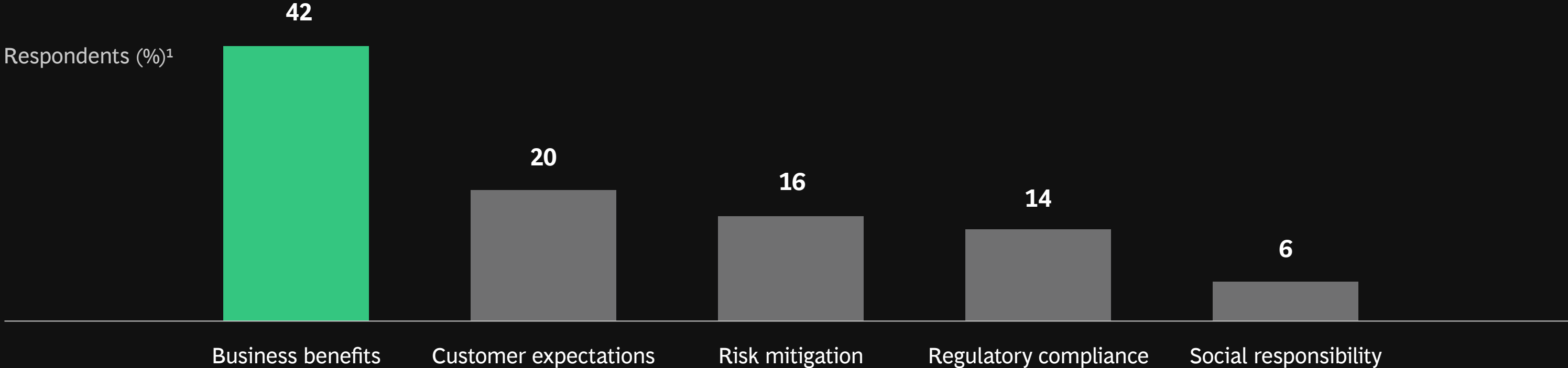


To achieve AI at scale, organizations must ensure that AI is being implemented responsibly

Source: BCG's Responsible AI Survey 2021.
Note: n = 1,034. RAI = responsible artificial intelligence.
¹Based on organizations' responses to 21 questions about their implementation across generally accepted RAI dimensions.

The primary motivator for organizations engaging in RAI is to realize business benefits

PRIMARY DRIVERS FOR PURSUING RAI



Source: BCG's Responsible AI Survey 2021.

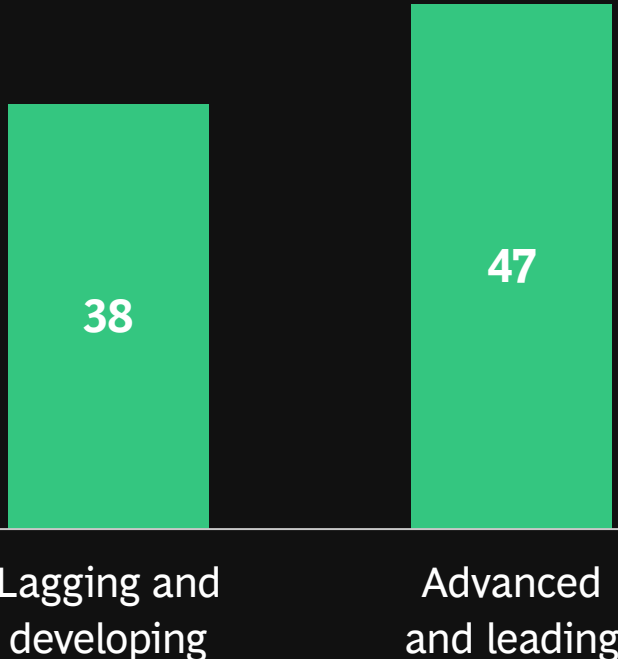
Note: n = 1,034. RAI = responsible artificial intelligence.

¹Survey question: What was the primary driver for your organization's engagement with responsible AI? Two percent of respondents selected others/don't know.

Organizations in the advanced and leading stages of RAI maturity are more likely to be pursuing RAI for its business benefits

BUSINESS BENEFITS ARE THE PRIMARY DRIVERS

Respondents (%)¹



EXAMPLES OF BUSINESS BENEFITS



Brand differentiation that leads to stronger customer relationships and, ultimately, higher profitability



Improved employee recruiting and retention, particularly of digital workers



A culture of responsible innovation, supported by corporate purpose and values

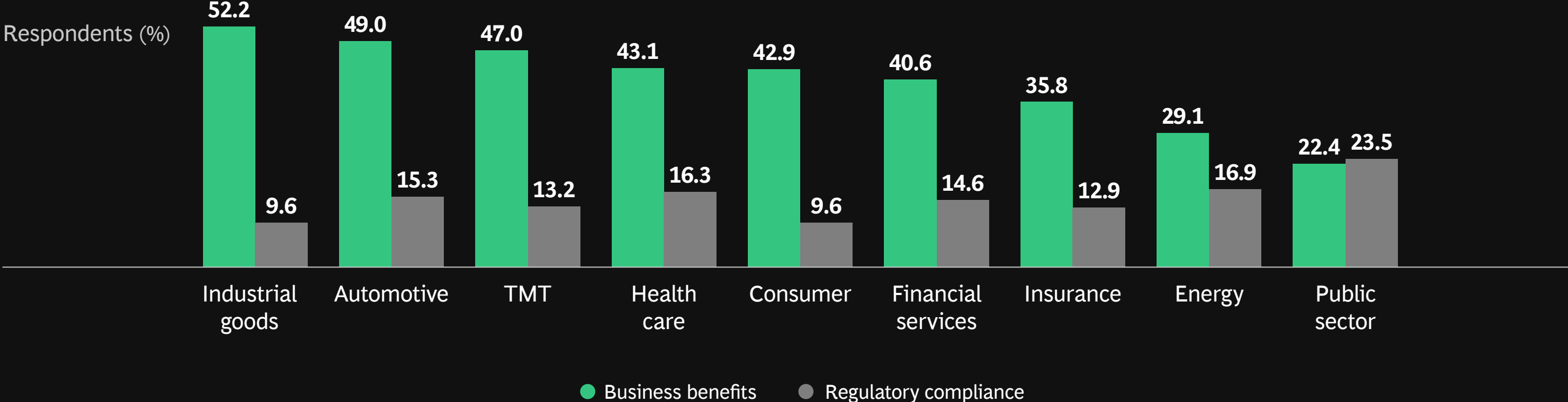
Source: BCG's Responsible AI Survey 2021.

Note: n = 478 organizations in the lagging and developing stages; n = 533 organizations in the advanced and leading stages. RAI = responsible artificial intelligence.

¹Survey question: What was the primary driver for your organization's engagement with responsible AI?

Organizations in different industries engage in RAI for different reasons

INDUSTRY BREAKDOWN OF ORGANIZATIONS WITH RAI INITIATIVES THAT WERE DRIVEN PRIMARILY BY BUSINESS BENEFITS OR REGULATION¹



Source: BCG's Responsible AI Survey 2021.
Note: n = 1,034. RAI = responsible artificial intelligence. TMT = technology, media, and telecommunications.
¹Survey question: What was the primary driver for your organization's engagement with responsible AI?

Survey methodology

To assess organizations' progress in implementing a responsible artificial intelligence (RAI) program, we collected and analyzed data from senior executives at 1,034 large organizations. Each organization had at least 2,000 employees and \$500 million in revenues.

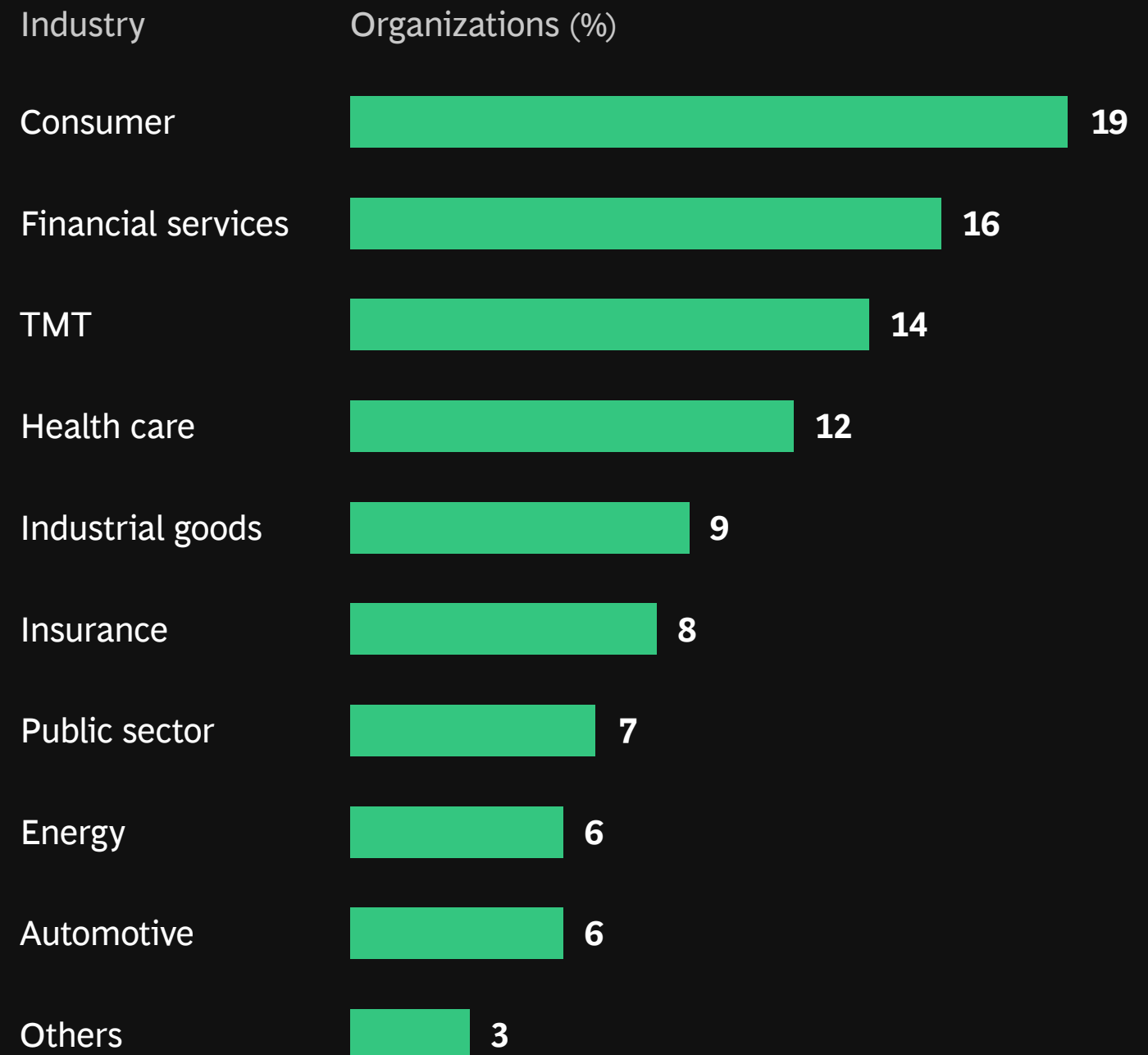
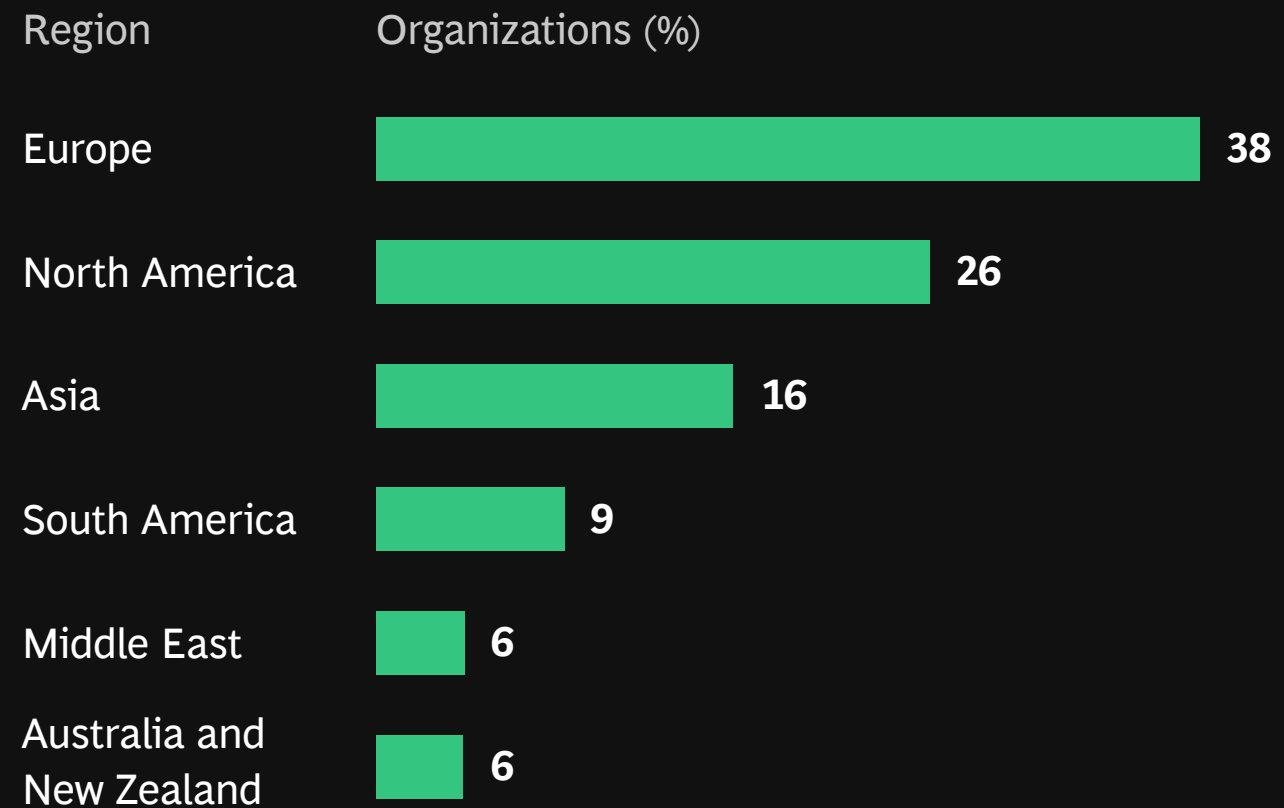
Those responding to the survey held managerial positions, and they were directly involved in either developing, using, or managing an AI system.

The executives were asked to report their organization's RAI maturity by choosing one of four options: no progress, principles defined, partially implemented, or fully implemented.

The respondents were then asked 21 assessment questions, which were grouped according to seven generally accepted RAI dimensions: accountability; transparency and "explainability"; fairness and equity; safety, security, and robustness; data and privacy governance; social and environmental impact mitigation; and human plus AI.

We used each organization's answers to determine its maturity score with respect to each of the seven dimensions and its overall maturity score. The range for scores was from 0 to 100.

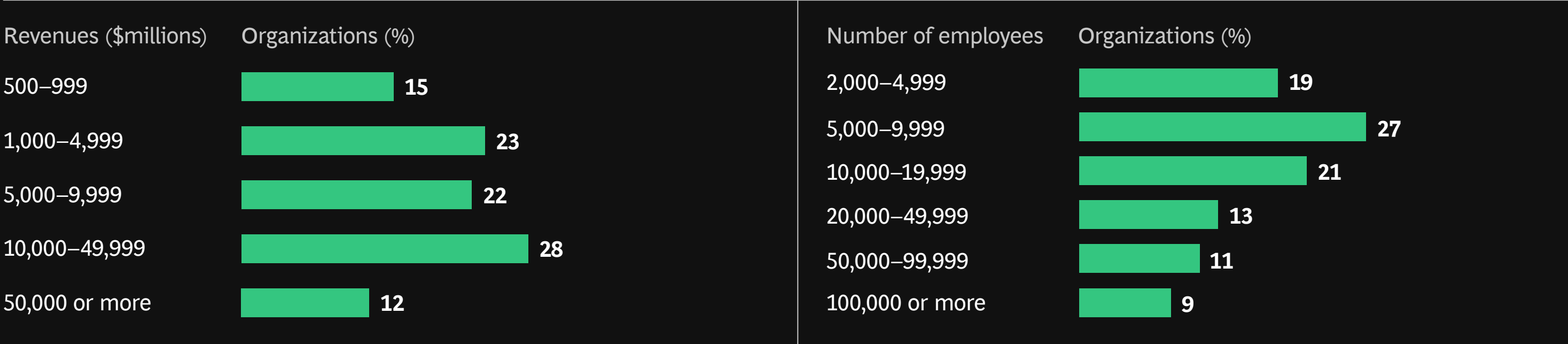
We surveyed organizations in six regions and nine major industries



Source: BCG's Responsible AI Survey 2021.

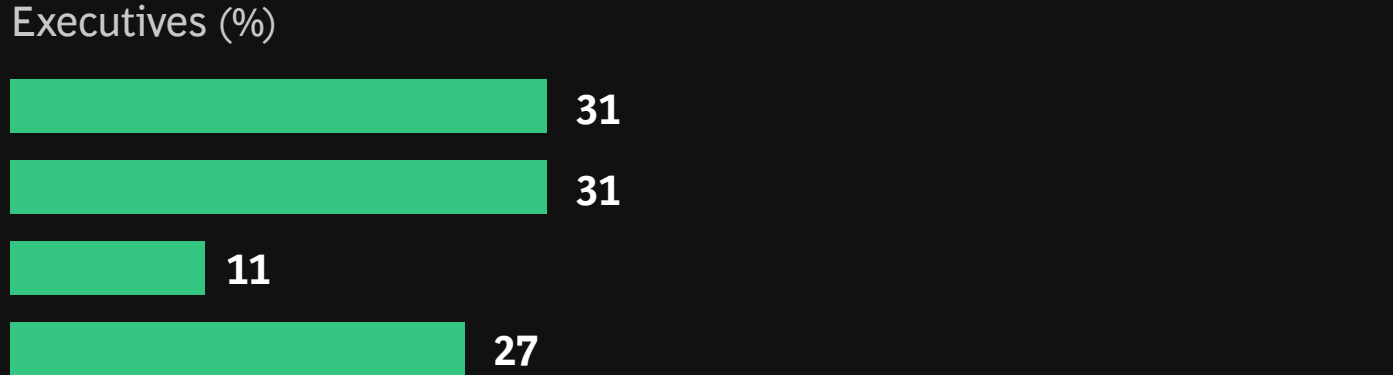
Note: n = 1,034. TMT = technology, media, and telecommunications.

Each organization that participated in the survey had at least \$500 million in revenues and 2,000 employees



Role of executives

- C-suite, operations (for example, CEO or chief operating officer)
- C-suite, technical (for example, chief data officer or chief information officer)
- Executive position (for example, vice president or senior vice president)
- Middle management (for example, director)



Source: BCG's Responsible AI Survey 2021.
 Note: n = 1,034.