2023
Europe and US Data, Analytics, and Artificial Intelligence Executive Organization and Compensation Survey

Contents

A message from the authors

Welcome to our third annual *Europe and US Data, Analytics, and Artificial Intelligence Executive Organization and Compensation Survey*, which examines both organizational structure and compensation for executive roles with artificial intelligence and/or data analytics responsibilities.

For this report, Heidrick & Struggles compiled compensation data from a survey fielded in summer 2023 of 201 executives in Europe and the United States.

We hope you enjoy reading the survey. As always, suggestions are welcome, so please feel free to contact us—or your Heidrick & Struggles representative—with questions and comments.

Methodology

In an online survey, conducted in summer 2023, we asked participants to provide information on their role structure and industry, alongside data on compensation including current base salary and bonus for the most recent fiscal year. Responses from 201 participants are included in the survey results. All data is self-reported anonymously and in aggregate.

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On confidentiality

The Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, was conducted on an anonymous basis for individuals and their employers, and Heidrick & Struggles has removed the data relating to identity from reported compensation figures.

Executive summary

As organizations across all industries are facing the challenge of adapting ever faster to a variety of tech-based innovations such as generative AI, data and analytics, and artificial intelligence (AI), technology leaders are becoming critical to organizations' strategy and execution. The results of our survey highlight this growing importance. In 2023, 65% of respondents say they are in a role that has existed at their company for less than five years—a drop from more than three-quarters a year ago. This suggests that these roles are becoming more established within organizations across industries and that the technology function is continuing to mature. Most respondents report a wide array of functions reporting to them, from data science and engineering to machine learning, emphasizing the expansive remit and critical nature of data, analytics, and AI expertise across organizations. In addition, respondents most often report to the chief digital officer (CDO), chief technology officer (CTO), or chief information officer (CIO) or the CEO, and there was a notable increase in the percentage reporting to the CDO, CTO, or CIO. This speaks to the historical, ongoing desire of technology leadership functions to own all technology responsibilities in organizations.

As for how these organizations are adapting to new technology innovations, results are mixed. Almost half of respondents think that their board mostly or to a large extent has sufficient expertise on data and analytics, but only 29% say the same about AI and machine learning. Regarding AI, in particular:

- A notable 10% of respondents overall said their company does not currently have an AI strategy leader.

- Thirty-seven percent of respondents think that their company's AI, data, and analytics function is either industry leading or among the best, and 12% think they have significant room for improvement.

- Customer or technical service and product development are currently the areas in which respondents are most commonly using AI.

- Despite the huge increase in attention being paid to AI this year, just over half of respondents, 52%, indicated they don't have adequate funding to build the data and analytics program their company needs.

- Two years from now, 57% expect to be using AI for recruitment and HR, up from 17% and the area where respondents expect the biggest increase in usage.

- Only 29% of respondents said that generative AI specifically was contributing to a measurable business improvement today. Forty-five percent said they have not seen measurable business improvement yet because they are currently piloting the use of AI before implementing it more widely.

As to compensation, reported average total compensation, including any annualized equity grants, for data, analytics, and artificial intelligence executives in the United States was $1,134,000. In Europe, it was $565,000. Average total cash compensation was $605,000 in the United States and $382,000 in Europe.

Respondent locations and company information

The executives who responded to the survey came predominantly from the United States. Several Western European countries were also represented.

Location (%)
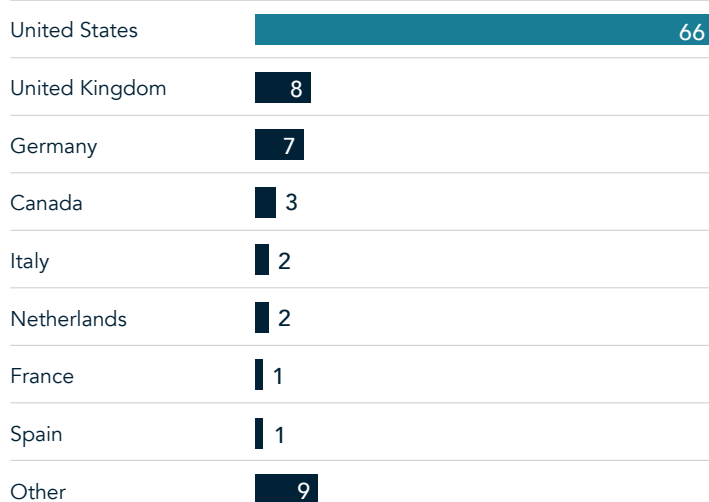
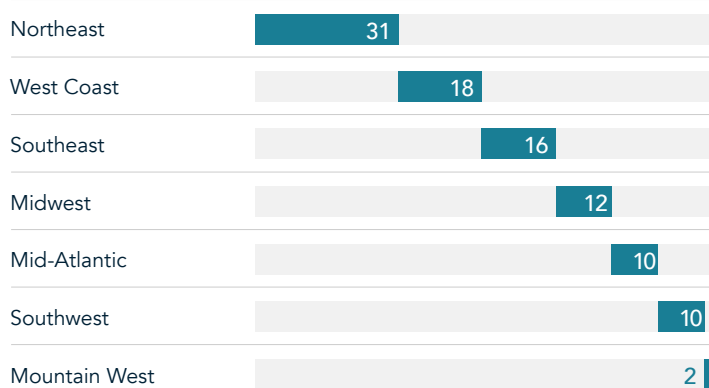|	
United States	66
United Kingdom	8
Germany	7
Canada	3
Italy	2
Netherlands	2
France	1
Spain	1
Other	9

Note: Numbers do not sum to 100%, because of rounding.

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 201

US region (%)

Northeast	31
West Coast	18
Southeast	16
Midwest	12
Mid-Atlantic	10
Southwest	10
Mountain West	2

Note: Numbers do not sum to 100%, because of rounding.

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 106

The respondents to the survey work across a range of industries, and just over half were at companies with an annual revenue of $5 billion or more.

Company industry and revenue (%)

Industry

Financial services	26
Technology	19
Consumer, retail, or media	14
Healthcare & life sciences or biotech	14
Business or professional services	6
Industrial, manufacturing, or energy	6
Telecoms or media	4
Fintech	3
Education or not-for-profit	1
Public sector	0
Other	5

Annual revenue

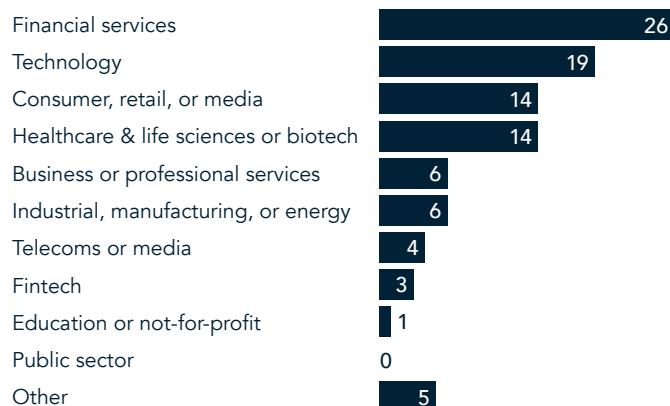|	
Pre-revenue	2
$0–$50.0 million	6
$51.0 million–$100.0 million	3
$101.0 million–$250.0 million	2
$251.0 million–$500.0 million	3
$501.0 million–$999.0 million	7
$1.0 billion–$4.9 billion	20
$5.0 billion–$9.9 billion	10
$10.0 billion–$19.9 billion	10
$20.0 billion–$50 billion	13
More than $50 billion	18
Don't know or prefer not to answer	4

Note: Numbers do not sum to 100%, because of rounding.

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 201

Demographics

Most respondents to this survey were men. In the United States, 53% of respondents were white, and 32% were Asian or Asian American.

Gender and ethnicity (%)

Gender

■ Men   ■ Women   ■ Non-binary
■ Prefer not to answer

1   3   11

84

Note: Numbers do not sum to 100%, because of rounding.

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 151
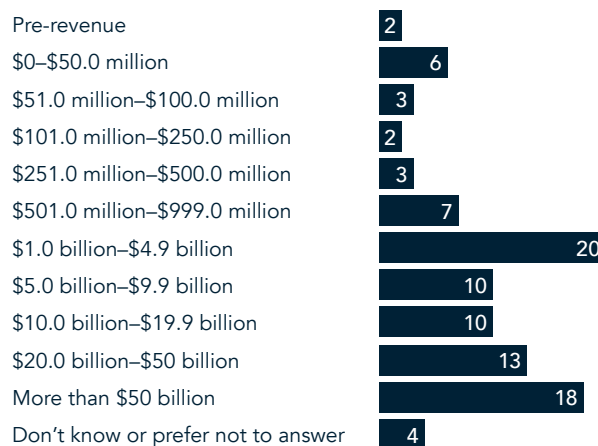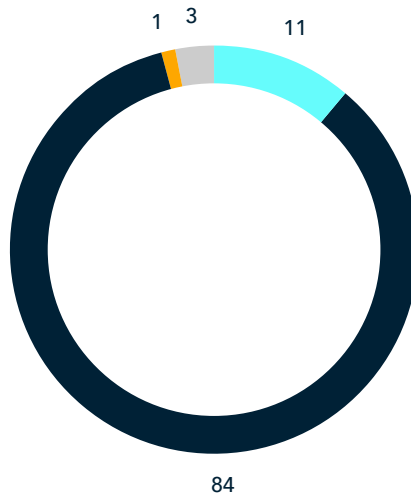
Ethnicity (US only)

Arab, Arab American, or Middle Eastern
1

Asian or Asian American
32

Black
3

Hispanic or Latino
2

Native American or Alaska Native
0

Native American or Pacific Islander
0

White
53

Mixed or two or more races
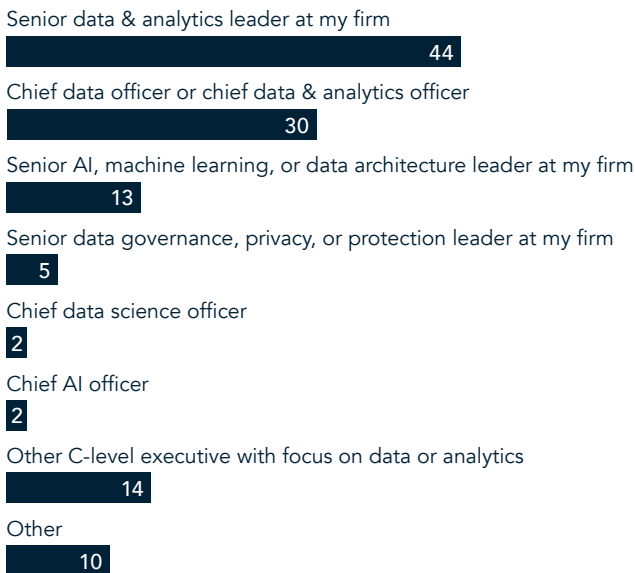3

Prefer not to answer
6

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 99

Role structure and remit

Data, analytics, and artificial intelligence responsibilities are led by people in roles that include chief data & analytics officer and senior data & analytics leader. More than two-thirds of the respondents are in global roles.

Respondents most often have roles focused on data science or analytics or data strategy, management, and governance. But 54% have machine learning responsibilities, and 50% have artificial intelligence responsibilities.

Title and remit (%)

Title

Senior data & analytics leader at my firm
44

Chief data officer or chief data & analytics officer
30

Senior AI, machine learning, or data architecture leader at my firm
13

Senior data governance, privacy, or protection leader at my firm
5

Chief data science officer
2

Chief AI officer
2

Other C-level executive with focus on data or analytics
14

Other
10

Note: Respondents were asked to select all that apply.

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 201

Role (%)

Current role function

Data science or data analytics
71

Data strategy or data management & governance
67

Machine learning
54

Business analytics or intelligence
52

Artificial intelligence
50

Data engineering or data architecture
46

Other data-driven role
11

None of the above
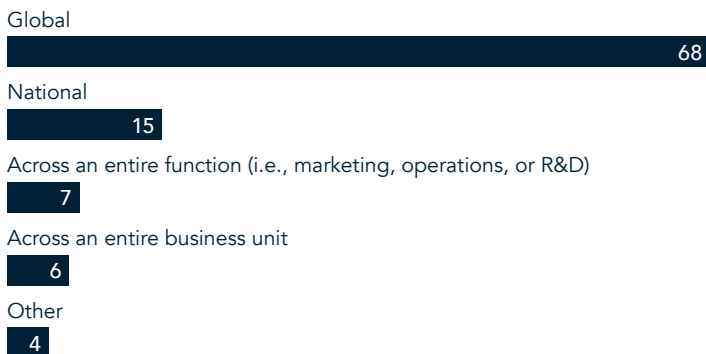4

Note: Respondents were asked to select all that apply.
Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 201

Remit

Global
68

National
15

Across an entire function (i.e., marketing, operations, or R&D)
7

Across an entire business unit
6

Other
4

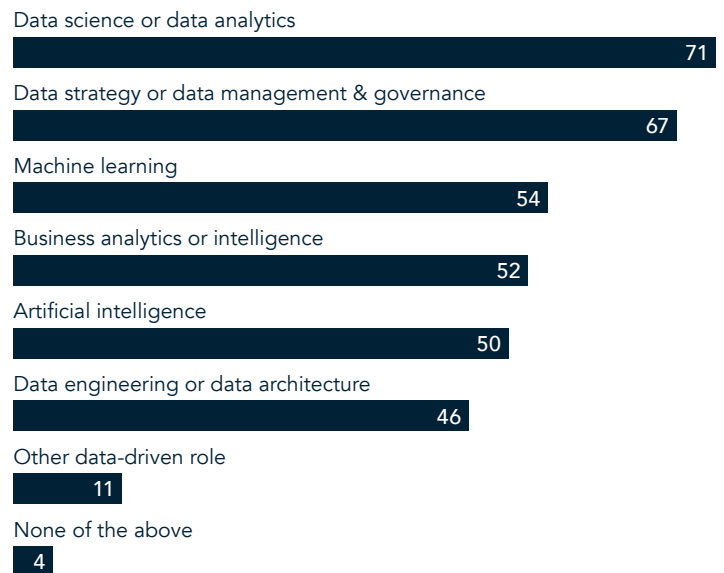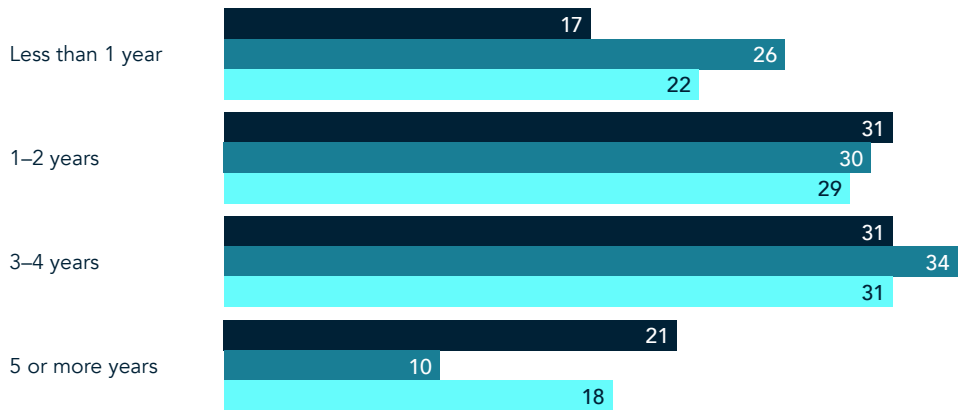Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 158

In 2022, 26% of the executives we surveyed had been in their role for less than one year, and only 10% had been in their role for five or more years; in 2023, tenure matured somewhat, with 21% of this year's respondents now in their role for five or more years, and only 17% in their role for less than a year. All this suggests that the talent market has cooled somewhat, with slightly less movement in the past year despite the greater attention paid to AI in 2023.

Role tenure, 2021–2023 (%)

■ 2023   ■ 2022   ■ 2021

Current role tenure

Current role tenure	2023	2022	2021
Less than 1 year	17	26	22
1–2 years	31	30	29
3–4 years	31	34	31
5 or more years	21	10	18

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 156; Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2022, n = 120; and Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2021, n = 179

Role tenure by region is mixed.

Role tenure, by region (%)

■ United States and Canada   ■ Europe

	United States and Canada	Europe
Less than 1 year	14	29
1–2 years	34	21
3–4 years	28	38
5 or more years	25	12

Note: Numbers may not sum to 100%, because of rounding.

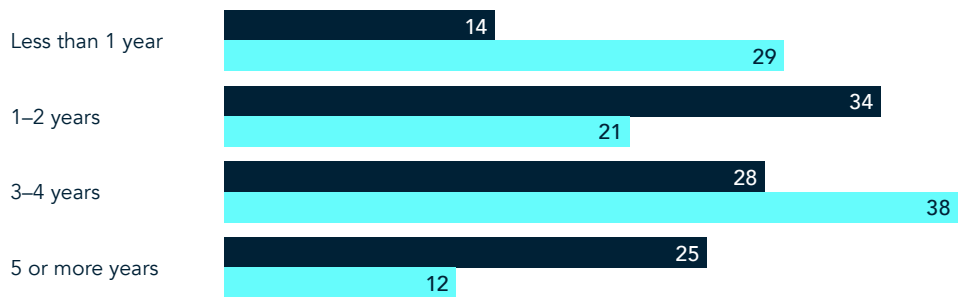Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 151
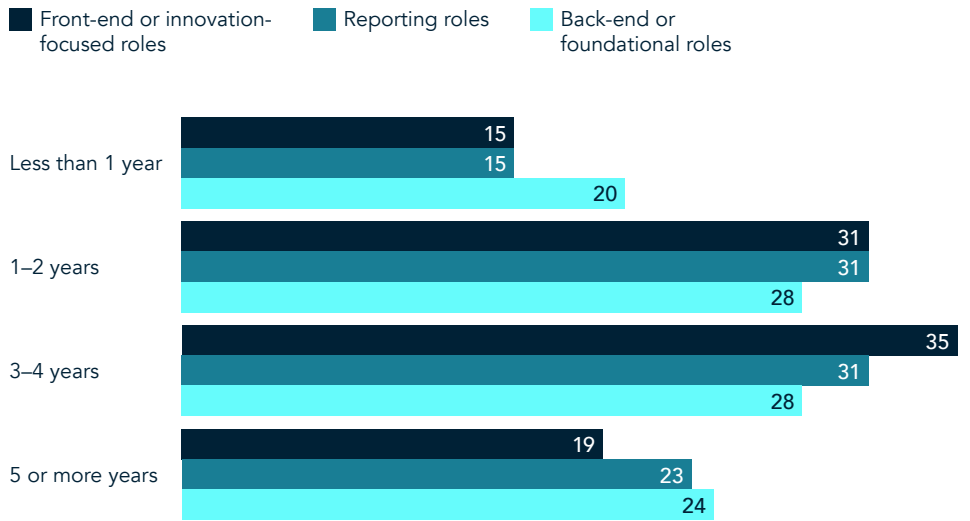
Role structure

This year, we divided the respondents into three distinct groups: those who work in data science or analytics, machine learning, or AI; those who work in business analytics or intelligence; and those who work in data engineering or architecture, data strategy, or data management and governance. The first group is considered more of a front-end group, focused on innovation; the second is focused more on reporting; and the third group is focused more on the back end or foundational elements of data.

By role tenure, data engineering or architecture leaders, the back-end or foundational roles, reported both the longest and shortest tenures, while those in data science, machine learning, and AI, the first group, were in the middle. As for their role maturity—that is, the length of time their role has existed at their company—most executives' roles have existed for at least three years.

Role tenure, by current role function (%)

- Front-end or innovation-focused roles
- Reporting roles
- Back-end or foundational roles

	Front-end or innovation-focused roles	Reporting roles	Back-end or foundational roles
Less than 1 year	15	15	20
1–2 years	31	31	28
3–4 years	35	31	28
5 or more years	19	23	24

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 156

Role maturity, by current role function (%)
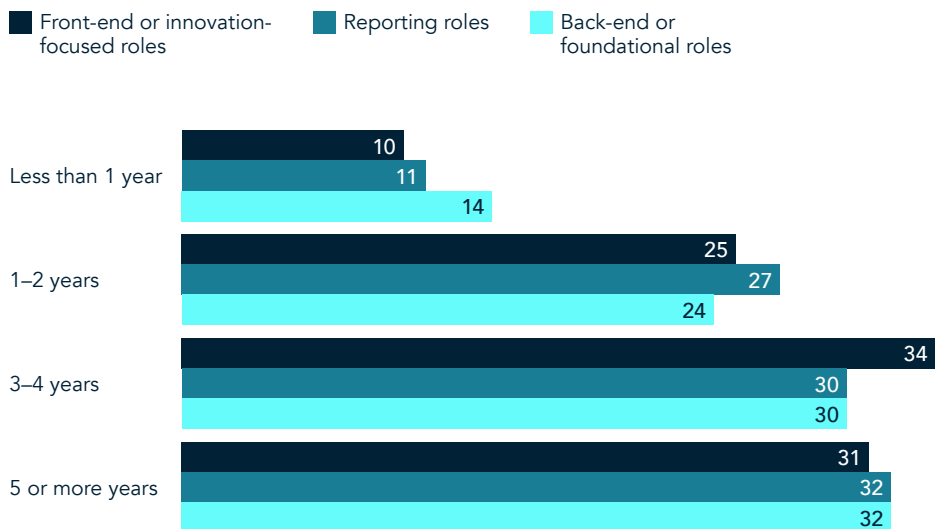
- Front-end or innovation-focused roles
- Reporting roles
- Back-end or foundational roles

	Front-end or innovation-focused roles	Reporting roles	Back-end or foundational roles
Less than 1 year	10	11	14
1–2 years	25	27	24
3–4 years	34	30	30
5 or more years	31	32	32

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 158

In 2023, 65% of respondents say they are in a role that has existed at their company for less than five years—a drop from more than three-quarters of respondents who said the same last year.
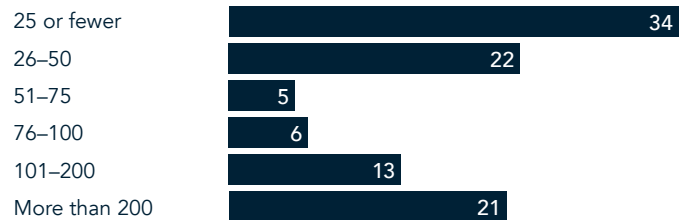
Role maturity at company (%)

Less than 1 year	10
1–2 years	23
3–4 years	32
5 or more years	35

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 158

There is a wide range of team sizes, with executives most often reporting teams of 25 or fewer.

Team size (%)

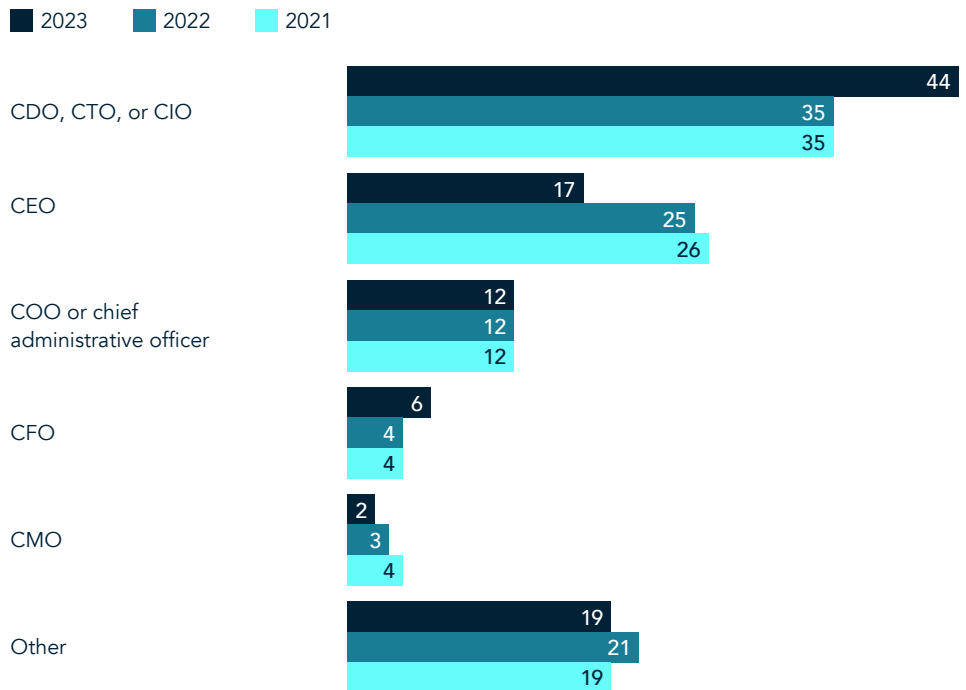|	
25 or fewer	34
26–50	22
51–75	5
76–100	6
101–200	13
More than 200	21

Note: Numbers do not sum to 100%, because of rounding.

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 158

Respondents report to varying senior leaders within their companies, most often the CDO, CTO, or CIO or the CEO. However, far fewer this year say they report to the CEO and far more to the CDO, CTO, or CIO. In part, this shift in reporting emphasis may reflect an increase in the importance of chief information and technology officers on executive leadership teams: for example, in 2022, more than two-thirds of Fortune 100 companies included a chief information or technology officer on their executive leadership team, up from under half in 2020.[1]

To whom respondents report, 2021–2023 (%)

■ 2023 ■ 2022 ■ 2021

	2023	2022	2021
CDO, CTO, or CIO	44	35	35
CEO	17	25	26
COO or chief administrative officer	12	12	12
CFO	6	4	4
CMO	2	3	4
Other	19	21	19

1 Heidrick & Struggles' analysis of the composition of Fortune 100 executive leadership teams.

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 156; Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2022, n = 120; and Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2021, n = 179

Respondents at companies with revenue under $1 billion far more frequently report to the CEO, while those at the largest organizations by revenue least often report to the CEO.

To whom respondents report, by company revenue (%)

■ Less than $1bn   ■ $1.0bn–$4.9bn   ■ $5.0bn–$19.9bn   ■ $20.0bn or more
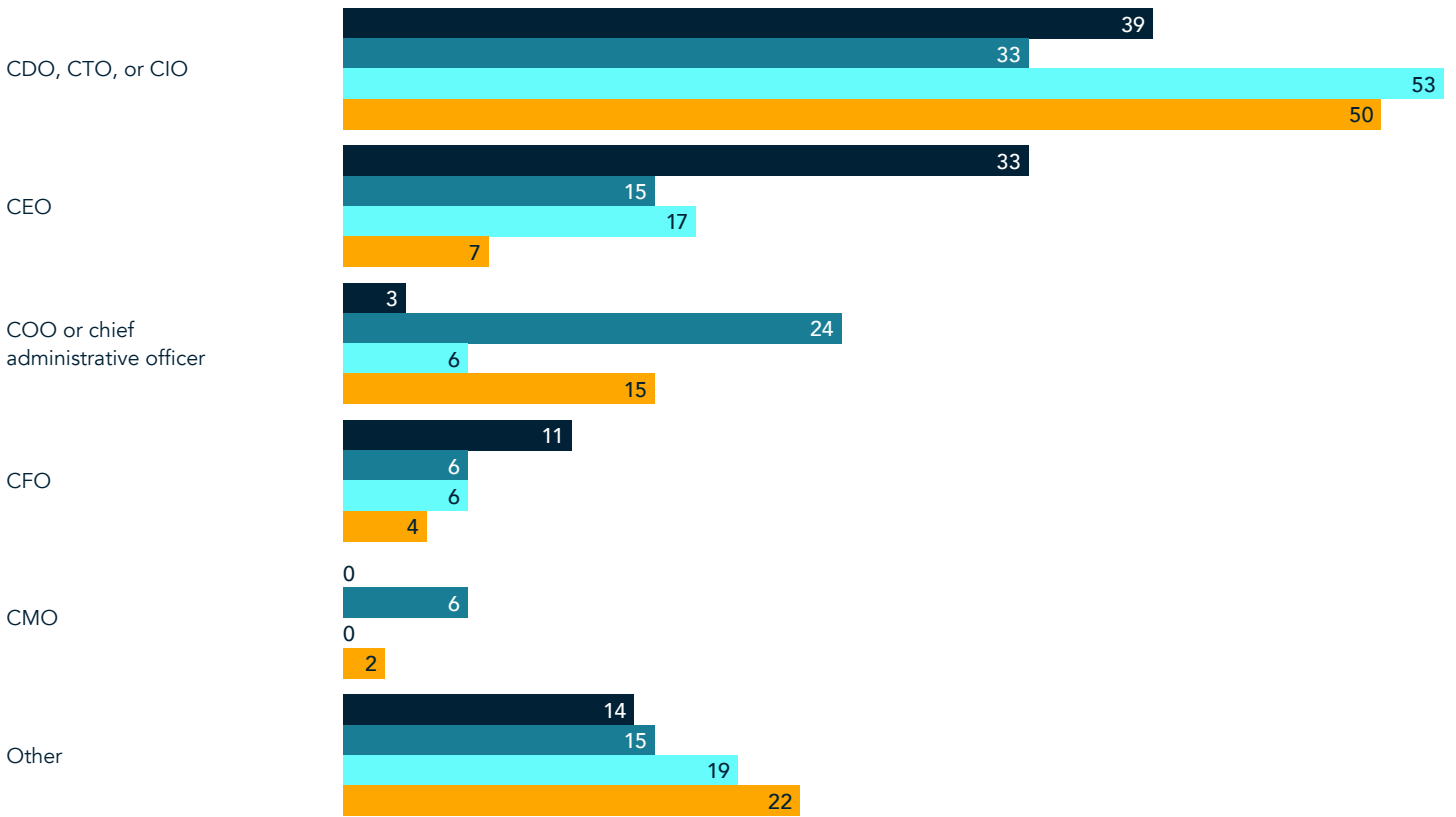
CDO, CTO, or CIO
- 39
- 33
- 53
- 50

CEO
- 33
- 15
- 17
- 7

COO or chief administrative officer
- 3
- 24
- 6
- 15

CFO
- 11
- 6
- 6
- 4

CMO
- 0
- 6
- 0
- 2

Other
- 14
- 15
- 19
- 22

Note: Numbers may not sum to 100%, because of rounding.

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 151

By industry, respondents at healthcare and life sciences companies most often report to the CDO, CTO, or CIO. Technology executives in the consumer and financial services industries say they report to the COO or chief administrative officer more often than they do the CEO. For financial services, at least, this makes sense; in that industry, the data, analytics, and artificial intelligence leader is more likely to be more focused on governance and strategy rather than product.

To whom respondents report, by industry (%)

- ■ Financial services or fintech
- ■ Technology & services
- ■ Healthcare & life sciences or biotech
- ■ Consumer
- ■ Other

CDO, CTO, or CIO
- Financial services or fintech: 36
- Technology & services: 43
- Healthcare & life sciences or biotech: 65
- Consumer: 42
- Other: 50

CEO
- Financial services or fintech: 16
- Technology & services: 17
- Healthcare & life sciences or biotech: 20
- Consumer: 13
- Other: 20

COO or chief administrative officer
- Financial services or fintech: 27
- Technology & services: 6
- Healthcare & life sciences or biotech: 0
- Consumer: 17
- Other: 0

CFO
- Financial services or fintech: 4
- Technology & services: 9
- Healthcare & life sciences or biotech: 5
- Consumer: 4
- Other: 10

CMO
- Financial services or fintech: 4
- Technology & services: 2
- Healthcare & life sciences or biotech: 0
- Consumer: 0
- Other: 0

Other
- Financial services or fintech: 13
- Technology & services: 23
- Healthcare & life sciences or biotech: 10
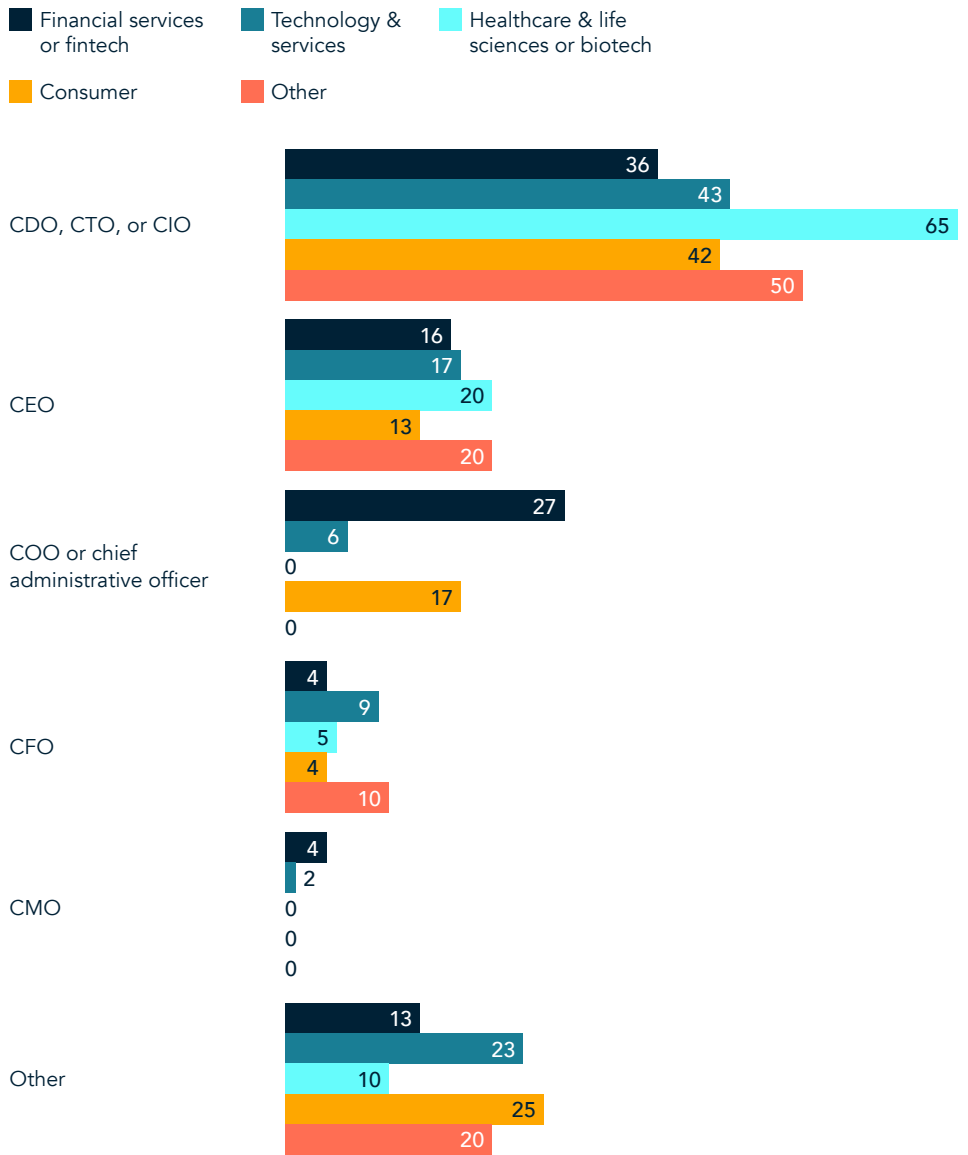- Consumer: 25
- Other: 20

Note: Numbers may not sum to 100%, because of rounding.

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 156

To whom respondents report, by function (%)
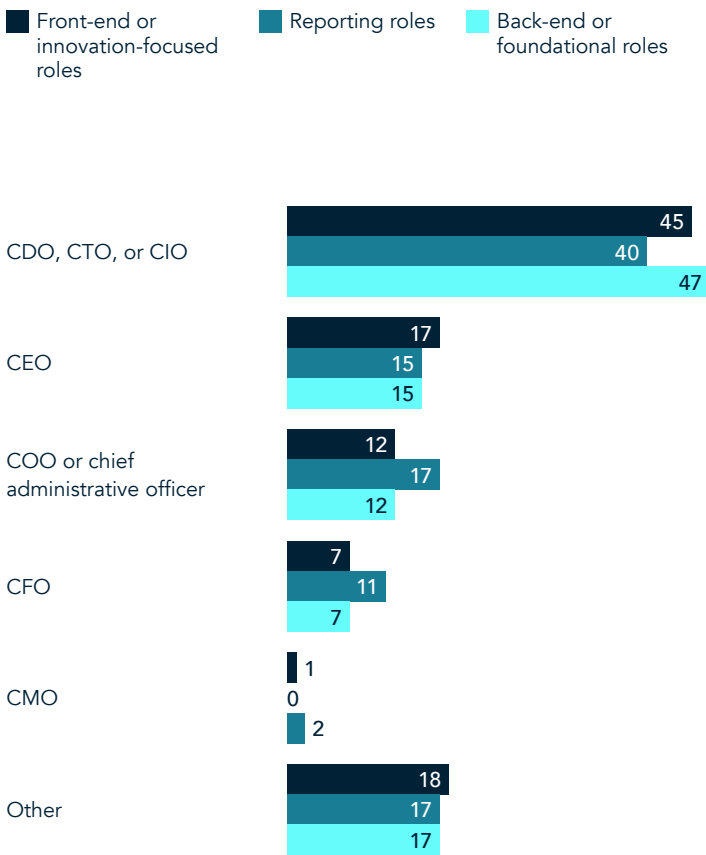
- ■ Front-end or innovation-focused roles
- ■ Reporting roles
- ■ Back-end or foundational roles

CDO, CTO, or CIO
- Front-end: 45
- Reporting: 40
- Back-end: 47

CEO
- Front-end: 17
- Reporting: 15
- Back-end: 15

COO or chief administrative officer
- Front-end: 12
- Reporting: 17
- Back-end: 12

CFO
- Front-end: 7
- Reporting: 11
- Back-end: 7

CMO
- Front-end: 1
- Reporting: 0
- Back-end: 2

Other
- Front-end: 18
- Reporting: 17
- Back-end: 17
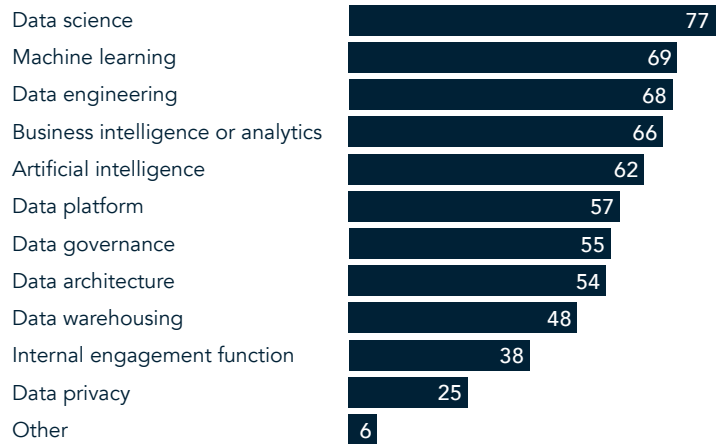
Note: Numbers may not sum to 100%, because of rounding.

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 156

Remit

As for who reports to them, results show that most respondents are responsible for a wide array of functions, emphasizing the expansive remit and critical nature of data, analytics, and artificial intelligence leaders across organizations. On average, respondents selected five functions.

Reporting lines (%)

What functions report to you? (Select all that apply)

Function	%
Data science	77
Machine learning	69
Data engineering	68
Business intelligence or analytics	66
Artificial intelligence	62
Data platform	57
Data governance	55
Data architecture	54
Data warehousing	48
Internal engagement function	38
Data privacy	25
Other	6

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 157

The marketing and customer engagement and product functions were commonly named stakeholders and were the functions that respondents said they spend the most time with. On the whole, these areas of collaboration also align with where respondents say AI is most often being used in their companies today (see chart "Where are you currently using AI? In two years?" on page 17).

However, several other functions that respondents also consider stakeholders are not necessarily functions they say they spend the most time with. Finance was the most common function considered a stakeholder—69% of respondents said so—and yet only 20% of respondents said that finance

was one of the functions they spend the most time with. In other words, only 29% of respondents who said finance is a stakeholder also said that they spend the most time with that function. For IT, we see the reverse trend. Only 51% of respondents selected it as a function they consider stakeholders. However, when we look at functions data teams spend the most time with, IT is in the top five.

The fact that the finance function is the most commonly named stakeholder is unsurprising, given quarterly reporting and financial analysis of all aspects of a business. However, requests from the finance function to the data, analytics, and AI leaders are less likely to be time-intensive, while requests from

stakeholders such as product and marketing are more likely to be bespoke and constantly evolving, given changes in customer expectations and needs.

This is also likely true of the data, analytics, and AI leaders' work with the legal function. While 60% of respondents said they consider the legal function stakeholders, only 8% said that legal is among the functions with which they spend the most time. This relationship generally takes a defensive approach rather than a more offensive, revenue-generating one, given the constantly changing regulatory landscape and the likelihood of unforeseen risks that will surface along with opportunities.
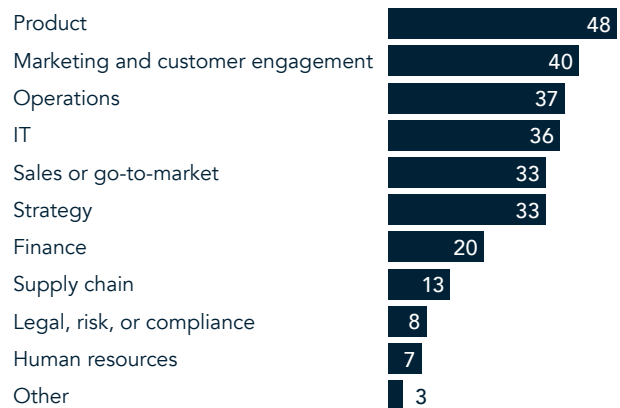
Function stakeholders (%)

Which function or functions do you and your team consider stakeholders? (Select all that apply)

Function	%
Finance	69
Marketing and customer engagement	66
Product	61
Sales or go-to-market	60
Strategy	60
Legal, risk, or compliance	60
Operations	56
IT	51
Human resources	47
Supply chain	35
Other	1

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 108

With which function or functions do you and your team spend the most time? (Select up to two)

Function	%
Product	48
Marketing and customer engagement	40
Operations	37
IT	36
Sales or go-to-market	33
Strategy	33
Finance	20
Supply chain	13
Legal, risk, or compliance	8
Human resources	7
Other	3

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 120
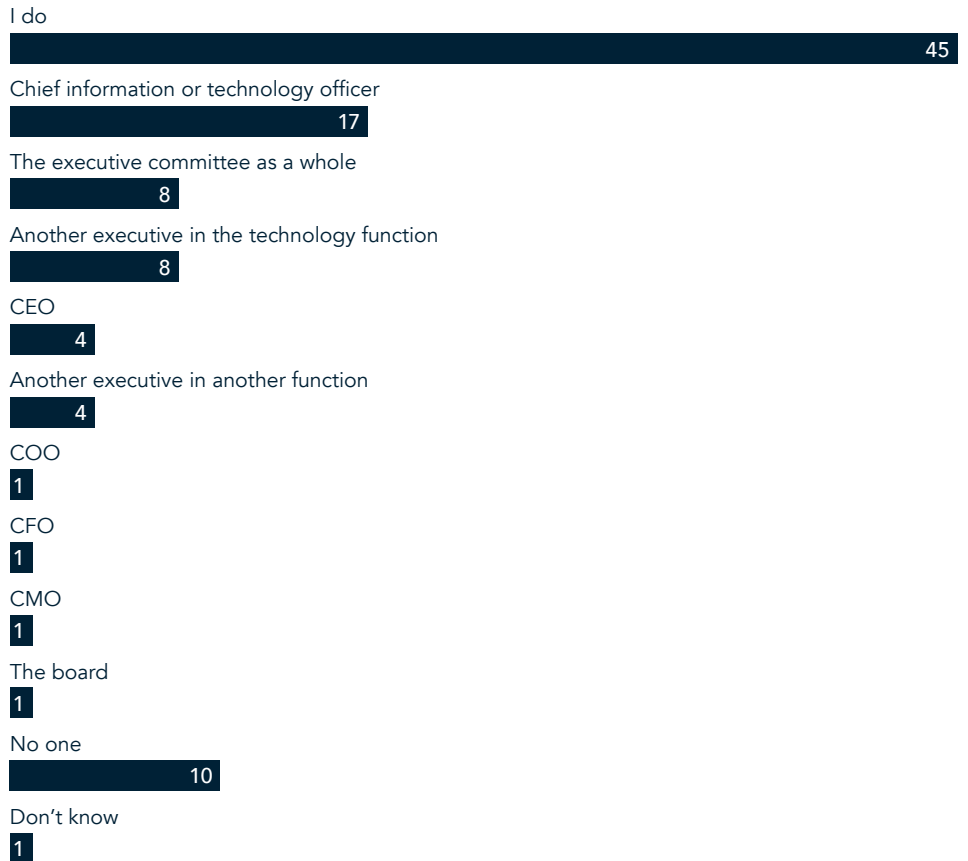
Artificial intelligence: Current use, expectations, and impact

Who owns the AI strategy?

This year, we asked the executives specifically about their perspectives on and use of artificial intelligence. Slightly less than half, 45%, of the respondents are the AI strategy leader at their company—however, they are by far the most common owner of the AI strategy. The next most commonly named AI strategy leader is the chief information or technology officer, at 17%.

AI strategy leader (%)

Who at your company owns the AI strategy today?

I do
45

Chief information or technology officer
17

The executive committee as a whole
8

Another executive in the technology function
8

CEO
4

Another executive in another function
4

COO
1

CFO
1

CMO
1

The board
1

No one
10

Don't know
1

Note: Numbers do not sum to 100%, because of rounding.

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 158

By industry, executives at consumer companies were those who most often said that no one at their company owns AI—21%. And, notably, 5% of healthcare and life sciences executives said that they do not know who owns AI at their company—even though they are a senior AI executive.
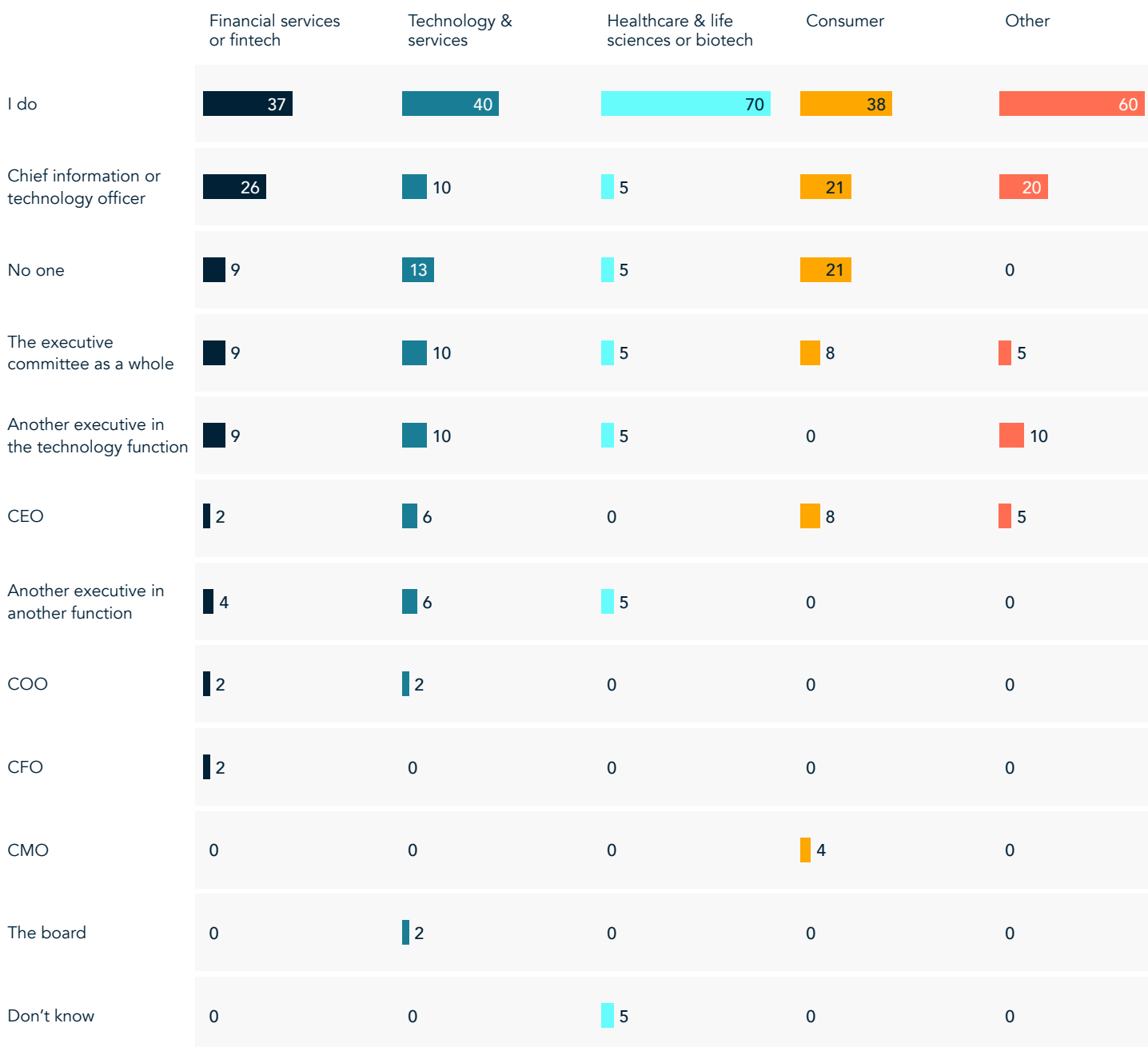
A notable 10% of respondents overall said that their company does not currently have an AI strategy leader. This lack of leadership is also reflected in the results of separate surveys we recently conducted of financial officers, general counsels, and technology and services, marketing, and supply chain leaders: 17% of respondents to those surveys said that no one in the organization owns the AI strategy.[2]

AI strategy leader, by industry (%)

Who at your company owns the AI strategy today?

	Financial services or fintech	Technology & services	Healthcare & life sciences or biotech	Consumer	Other
I do	37	40	70	38	60
Chief information or technology officer	26	10	5	21	20
No one	9	13	5	21	0
The executive committee as a whole	9	10	5	8	5
Another executive in the technology function	9	10	5	0	10
CEO	2	6	0	8	5
Another executive in another function	4	6	5	0	0
COO	2	2	0	0	0
CFO	2	0	0	0	0
CMO	0	0	0	4	0
The board	0	2	0	0	0
Don't know	0	0	5	0	0

Note: Numbers may not sum to 100%, because of rounding.

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 158
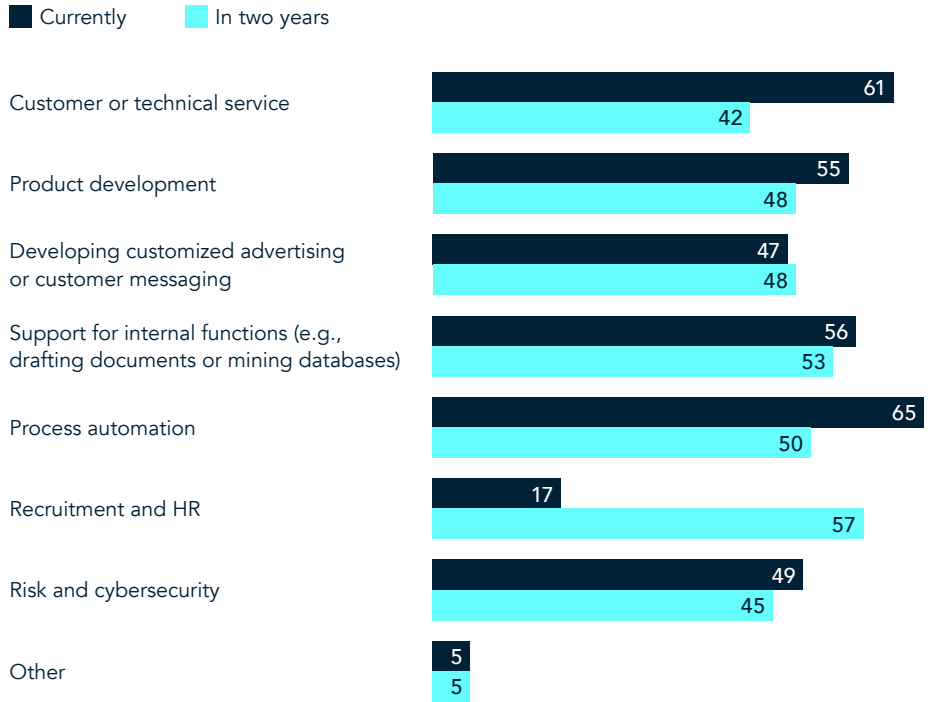
Current and projected AI use

Customer or technical service and process automation are currently the areas in which respondents are most commonly using AI, though fewer plan to be using it in those areas in two years. This is also reflected in our other recent surveys, which find customer or technical service to be the most common area of use.

The AI leaders who responded to this survey anticipate usage to level off or fall in many areas where it is currently being used, but they expect a notable jump in the use of AI for recruitment and HR: while only 17% of respondents said that they are currently using AI in this area, that share jumps to 57% in two years.

Artificial intelligence: Current use and expectations (%)

Where are you currently using AI? In two years? (Select all that apply)

■ Currently   ■ In two years

	Currently	In two years
Customer or technical service	61	42
Product development	55	48
Developing customized advertising or customer messaging	47	48
Support for internal functions (e.g., drafting documents or mining databases)	56	53
Process automation	65	50
Recruitment and HR	17	57
Risk and cybersecurity	49	45
Other	5	5

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 144

Perhaps most important, regardless of where AI is currently being used, only 29% of respondents said that generative AI in particular was contributing to a measurable business improvement today. A plurality, 45%, have not seen measurable business improvement yet because, they say, they are currently piloting the use of generative AI before implementing it more widely. Encouragingly, only 3% of respondents have both implemented generative AI widely and seen no positive business improvement.

Generative AI: Business impact (%)

Thinking specifically about generative AI, has your company already experienced a measurable business improvement from using it?

	%
Yes	29
No, because we aren't using it	22
No, because we are piloting it but haven't implemented it widely	45
No, we have implemented it widely but have seen no positive business impacts	3
Don't know	1

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 157
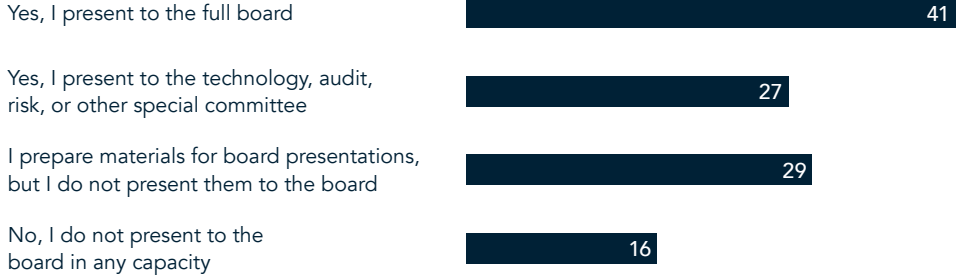
Relationship with the board

More than two-thirds of respondents present to the board in some capacity, and respondents are generally satisfied with this: more than half either agree or strongly agree that they have adequate exposure to the board or board members. However, this leaves 43% of respondents who feel they do not have adequate exposure to the board—a much higher share than the 13% of chief information security officers (CISOs) who said the same in a survey conducted earlier this year.[3]

Women more often than men prepare materials for board presentations, even if they do not directly present, whereas men more often have no interaction with the board at all.

Board presentations (%)

Do you present to the board?

Yes, I present to the full board
41

Yes, I present to the technology, audit, risk, or other special committee
27

I prepare materials for board presentations, but I do not present them to the board
29

No, I do not present to the board in any capacity
16

Note: Respondents were asked to select all that apply.

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 157

Attitudes around board exposure and effectiveness (%)

■ Strongly disagree   ■ Disagree   ■ Agree   ■ Strongly agree

I have adequate exposure to the board or board members

| 12 | 31 | 41 | 15 |

Note: Numbers do not sum to 100%, because of rounding.

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 157

3 Matt Aiello, Max Randria, Camilla Reventlow, Guy Shaul, Scott Thompson, and Adam Vaughan, *2023 Global Chief Information Security Officer (CISO) Survey*, Heidrick & Struggles, heidrick.com.
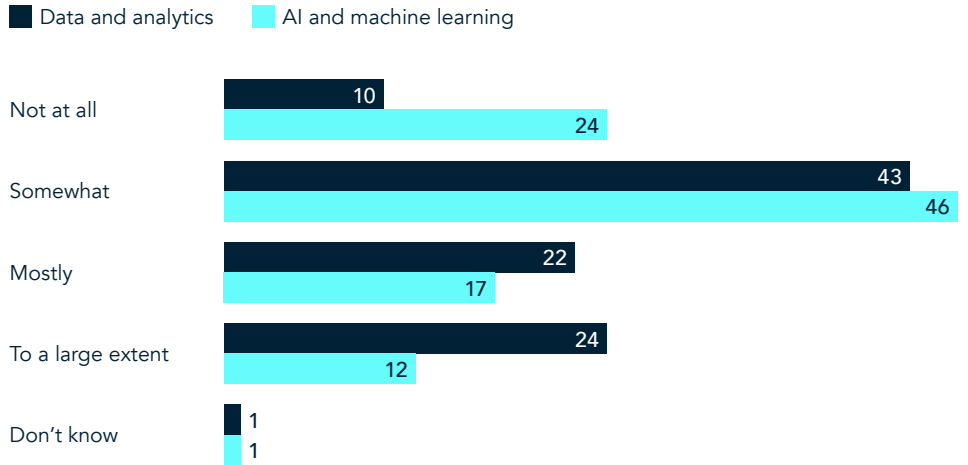
Respondent opinions are mixed on whether the board knows enough to respond effectively. When it comes to data and analytics, almost half, 46%, of respondents think that the board on the whole has sufficient expertise. When it comes to AI and machine learning, however, that share drops to only 29%.

These perceptions of boards' data and analytics expertise align with those of surveys Heidrick & Struggles has recently conducted of CISOs and digital and technology leaders. Only 48% of CISOs, for example, said the board had the knowledge or expertise to respond effectively to their presentations, while 46% of US digital and technology leaders said the same.[4]

As the use of data and analytics continues to evolve and artificial intelligence and machine learning become more integrated into product development and operations, moving closer to the core of strategy, ensuring that boards are equipped to engage in these conversations and understand the opportunities and risks inherent in evolving technologies is critical.

Attitudes around board effectiveness, by area of expertise (%)

Board has knowledge or expertise to respond effectively to presentations on...

■ Data and analytics   ■ AI and machine learning

	Data and analytics	AI and machine learning
Not at all	10	24
Somewhat	43	46
Mostly	22	17
To a large extent	24	12
Don't know	1	1

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 156

Functional effectiveness and prospects

Markedly more survey respondents are positive about the effectiveness of their function than concerned: 37% think their company's function is either industry leading or among the best, while only 12% think they have significant room for improvement.

Attitudes around the company's data, analytics, and AI function (%)

Thinking about your company's data, analytics, and AI function overall, how advanced is it compared to your regional peers?

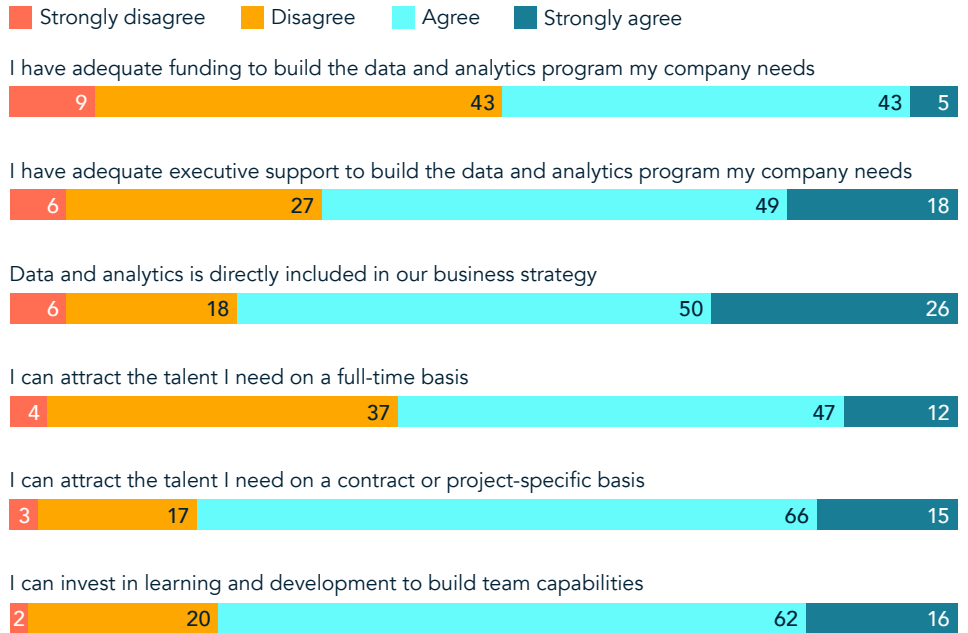|	
We have significant room for improvement	12
Slightly below our industry peers	20
About the same as our industry peers	30
Industry leading	30
Among the best	7
Don't know	1

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 156

Respondents are mixed when it comes to funding: slightly more than half, 52%, indicated they don't think they have adequate funding to build the data and analytics program they need. This is notably higher than the share of CISOs or digital and technology leaders who said the same: 41% and 31%, respectively.[5] This may be in part because AI, in particular, is still proving its commercial worth.

Respondents are slightly more confident that they have the executive support to build those programs, that they can invest in learning and development to build team capabilities, and that they can attract the talent they need one way or another.

Attitudes around the company's data, analytics, and AI function (%)

In my current role...

Legend: ■ Strongly disagree ■ Disagree ■ Agree ■ Strongly agree

I have adequate funding to build the data and analytics program my company needs

Strongly disagree	Disagree	Agree	Strongly agree
9	43	43	5

I have adequate executive support to build the data and analytics program my company needs

Strongly disagree	Disagree	Agree	Strongly agree
6	27	49	18

Data and analytics is directly included in our business strategy

Strongly disagree	Disagree	Agree	Strongly agree
6	18	50	26

I can attract the talent I need on a full-time basis

Strongly disagree	Disagree	Agree	Strongly agree
4	37	47	12

I can attract the talent I need on a contract or project-specific basis

Strongly disagree	Disagree	Agree	Strongly agree
3	17	66	15

I can invest in learning and development to build team capabilities

Strongly disagree	Disagree	Agree	Strongly agree
2	20	62	16

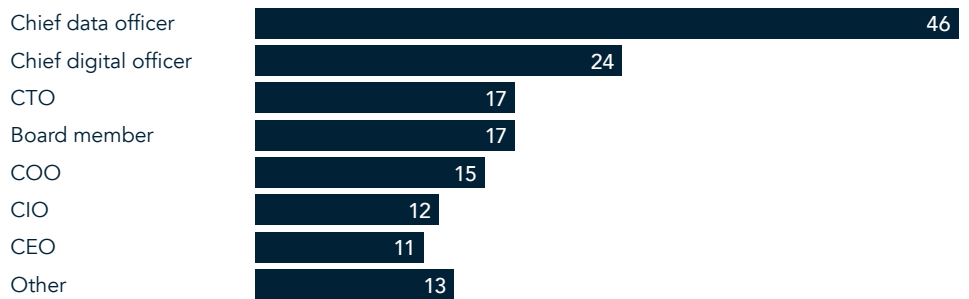Note: Numbers may not sum to 100%, because of rounding.

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 157

5 Matt Aiello, Max Randria, Camilla Reventlow, Guy Shaul, Scott Thompson, and Adam Vaughan, *2023 Global Chief Information Security Officer (CISO) Survey*, Heidrick & Struggles, heidrick.com; and Katie Graham Shannon, *2023 US Digital & Technology Officers Organization and Compensation Survey*, Heidrick & Struggles, heidrick.com.

Next steps

Respondents most often said their ideal next title is chief data officer, followed by chief digital officer, just as they did last year.

Ideal next role (%)

Role	%
Chief data officer	46
Chief digital officer	24
CTO	17
Board member	17
COO	15
CIO	12
CEO	11
Other	13

Note: Respondents could select up to two roles.

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 158

Data, analytics, and artificial intelligence executive compensation

Reported average total compensation, including any annualized equity grants, for data, analytics, and artificial intelligence executives in the United States was $1,134,000. In Europe, it was $565,000.

In comparison, for CISOs in the United States, average total compensation was $1,483,000. For CISOs in Europe, it was $552,000.[6] Digital and technology officers based in the United States reported slightly higher compensation: their average total compensation was $1,895,000.[7]

In 2023, average total cash compensation for data, analytics, and AI executives was $605,000 in the United States and $382,000 in Europe.

The highest-earning data, analytics, and AI executives, those in the 95th percentile of total compensation, reported earning $2,600,000 in the United States, compared to $2,723,000 in 2022, and $1,250,000 in Europe, compared to $1,626,000 in 2022.

In addition to reported salaries overall being generally lower in Europe, 73% of US executives reported receiving some form of sign-on or joining bonus, while only 29% of those in Europe said the same. (See page 26 for full sign-on equity data.)

United States

In the United States, average total compensation reported for data, analytics, and artificial intelligence executives was $1,134,000. Those in financial services saw the highest base compensation, while those in technology and services saw the highest total compensation, owing to their increased annual equity or long-term incentives (LTI).

Executives with between three and four years of experience saw the highest compensation—higher even than their more experienced peers, though this is attributable only to their increased equity/LTI. This higher equity could be explained by the salary inflation caused by the Covid-19 pandemic in 2020. Though salaries still remain high, they have since leveled out.

By region, executives based in the Midwest saw the highest average base compensation, while those in the Mid-Atlantic saw the highest average bonuses and therefore total cash compensation. However, executives at West Coast companies saw the highest average total compensation, and executives in the Southwest the lowest.

Europe

Average reported base compensation in Europe was $261,000, and average total compensation was $565,000. Here, executives in technology and services companies saw the highest average total cash compensation. Executives in the United Kingdom reported higher compensation than their peers based in Germany, with the exception of annual equity/LTI.

6 Matt Aiello, Max Randria, Camilla Reventlow, Guy Shaul, Scott Thompson, and Adam Vaughan, *2023 Global Chief Information Security Officer (CISO) Survey*, Heidrick & Struggles, heidrick.com.

7 Katie Graham Shannon, *2023 US Digital & Technology Officers Organization and Compensation Survey*, Heidrick & Struggles, heidrick.com.

Compensation trends: United States (USD, thousands)

		Base				Bonus				Total cash compensation				Annual equity/LTI				Total compensation			
		25th	Avg	75th	95th	25th	Avg	75th	95th	25th	Avg	75th	95th	25th	Avg	75th	95th	25th	Avg	75th	95th
	Overall (n = 99)	300	**403**	430	750	80	**233**	300	850	370	**605**	700	1,400	178	**510**	600	1,750	550	**1,134**	1,450	2,600
Industry	Financial services or fintech (n = 34)	300	**418**	450	1,000	100	**324**	400	1,000	400	**693**	830	1,500	100	**356**	400	1,100	510	**1,071**	1,600	2,100
	Technology & services (n = 28)	300	**417**	445	1,000	80	**190**	200	600	380	**570**	690	1,300	300	**860**	1,300	2,000	780	**1,470**	2,130	2,900
	Healthcare & life sciences or biotech (n = 9)	300	**410**	480	750	55	**148**	270	300	340	**515**	683	950	200	**437**	600	1,000	660	**920**	1,090	1,550
	Consumer (n = 18)	300	**371**	410	610	90	**210**	250	600	380	**581**	730	1,210	200	**431**	388	1,500	590	**1,023**	1,130	2,410
	Other (n = 10)	300	**363**	400	750	50	**156**	100	750	340	**519**	500	1,500	50	**325**	600	1,000	420	**844**	1,270	2,500
Company revenue	Less than $1.0bn (n = 22)	290	**395**	350	750	53	**139**	100	965	335	**436**	443	1,270	100	**490**	800	2,000	480	**921**	1,170	2,400
	$1.0bn–$4.9bn (n = 23)	300	**408**	450	1,000	50	**200**	310	600	340	**610**	780	1,400	100	**539**	700	3,000	420	**1,204**	1,600	4,600
	$5.0bn–$19.9bn (n = 19)	280	**403**	400	1,400	100	**230**	250	1,000	370	**578**	600	1,500	170	**297**	350	1,000	590	**944**	1,000	2,500
	$20.0bn–$50.0bn (n = 16)	310	**419**	493	650	163	**301**	360	850	525	**721**	865	1,300	300	**520**	600	1,500	1,010	**1,272**	1,550	2,410
	More than $50.0bn (n = 16)	285	**408**	500	700	100	**355**	558	1,600	380	**763**	1,013	2,200	350	**746**	1,300	1,750	800	**1,431**	1,850	2,600
Role tenure	Less than 1 year (n = 10)	300	**314**	380	400	50	**178**	100	1,000	330	**492**	500	1,300	50	**301**	500	1,000	520	**871**	830	2,300
	1–2 years (n = 37)	270	**383**	410	750	60	**191**	250	600	330	**534**	670	1,210	200	**404**	400	1,200	500	**964**	1,070	2,500
	3–4 years (n = 29)	300	**469**	500	1,000	100	**313**	400	1,000	400	**728**	900	1,600	203	**815**	1,250	2,000	820	**1,525**	1,888	2,900
	5 or more years (n = 22)	300	**394**	400	700	70	**225**	250	600	390	**619**	700	1,400	200	**353**	350	1,500	590	**972**	1,370	2,100
Team size	50 or fewer (n = 52)	250	**384**	378	1,000	50	**145**	200	400	323	**467**	538	950	100	**363**	400	1,300	480	**849**	1,000	2,130
	51 or more (n = 47)	300	**424**	500	700	100	**322**	400	1,000	450	**746**	900	1,500	230	**636**	800	2,000	780	**1,363**	1,800	2,600
US region	Northeast (n = 30)	270	**428**	450	1,000	100	**233**	300	850	380	**607**	760	1,300	155	**429**	550	1,500	548	**1,092**	1,488	2,300
	Mid-Atlantic (n = 10)	300	**437**	600	750	50	**350**	600	1,600	350	**787**	1,100	2,200	230	**648**	1,000	1,500	680	**1,367**	2,500	2,600
	Southeast (n = 14)	300	**401**	400	1,000	100	**198**	250	600	400	**599**	600	1,600	93	**479**	388	3,000	513	**1,053**	1,085	4,600
	Midwest (n = 12)	303	**455**	440	1,400	100	**296**	600	600	400	**665**	1,000	1,210	350	**583**	800	1,200	1,003	**1,379**	1,763	2,410
	Southwest (n = 11)	300	**336**	400	470	100	**164**	220	350	360	**500**	670	700	200	**306**	350	600	660	**798**	1,000	1,270
	West Coast (n = 17)	300	**367**	400	700	70	**232**	200	1,000	370	**599**	820	1,500	225	**808**	1,450	2,000	638	**1,450**	2,060	2,900

Compensation trends: Europe (USD, thousands)

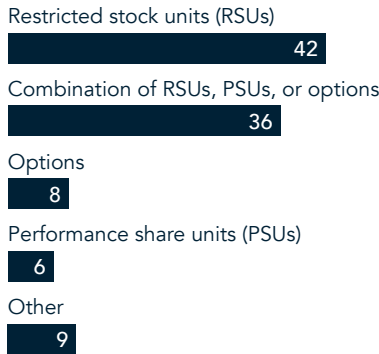|		Base				Bonus				Total cash compensation				Annual equity/LTI				Total compensation			
		25th	Avg	75th	95th	25th	Avg	75th	95th	25th	Avg	75th	95th	25th	Avg	75th	95th	25th	Avg	75th	95th
	Overall (n = 38)	180	**261**	300	600	43	**118**	173	400	235	**382**	458	900	50	**185**	300	550	350	**565**	750	1,250
Industry	Fianncial services or fintech (n = 6)	210	**268**	300	350	50	**118**	200	200	320	**390**	500	550	40	**190**	100	700	360	**580**	600	1,250
	Technology & services (n = 12)	115	**309**	360	1,000	43	**156**	200	400	163	**465**	665	1,400	40	**173**	300	400	290	**553**	860	1,400
	Healthcare & life sciences or biotech (n = 7)	180	**189**	200	250	10	**88**	150	300	180	**278**	400	500	60	**237**	550	550	350	**527**	770	770
	Consumer (n = 5)	200	**284**	360	380	50	**68**	90	100	280	**352**	430	460	100	**150**	225	250	415	**510**	575	580
	Other (n = 8)	200	**234**	220	450	53	**116**	123	450	235	**350**	338	900	50	**217**	400	400	320	**700**	1,300	1,300
Company revenue	Less than $1.0bn (n = 11)	170	**208**	250	360	20	**48**	60	100	220	**252**	280	460	200	**260**	250	550	480	**536**	560	770
	$1.0bn–$4.9bn (n = 8)	165	**231**	218	600	40	**96**	200	200	180	**334**	400	800	40	**120**	90	400	290	**482**	420	1,200
	$5.0bn–$19.9bn (n = 10)	210	**304**	380	450	50	**171**	200	450	320	**475**	560	900	100	**253**	400	700	360	**728**	1,100	1,300
	$20.0bn or more (n = 8)	200	**319**	300	1,000	90	**317**	300	1,500	285	**488**	500	1,400	60	**74**	100	100	380	**414**	470	600
Role tenure	2 or fewer years (n = 19)	180	**250**	250	1,000	20	**80**	100	400	220	**334**	320	1,400	50	**113**	200	250	350	**402**	480	560
	3 or more years (n = 19)	200	**273**	350	600	50	**220**	200	1,448	250	**425**	550	900	50	**230**	400	700	313	**668**	1,040	1,300
Team size	50 or fewer (n = 23)	180	**262**	300	600	30	**164**	120	450	220	**367**	390	900	40	**172**	250	550	350	**529**	580	1,300
	51 or more (n = 15)	200	**261**	300	380	60	**143**	200	400	280	**404**	500	700	68	**200**	300	700	320	**608**	833	1,250
Europe region	Germany (n = 13)	170	**279**	300	1,000	60	**155**	200	400	250	**435**	500	1,400	60	**191**	200	700	320	**543**	470	1,250
	United Kingdom (n = 11)	210	**306**	380	600	50	**260**	200	1,500	280	**448**	560	900	40	**188**	300	400	360	**636**	860	1,300
	Other Europe (n = 14)	180	**209**	200	380	20	**68**	90	200	220	**279**	320	500	40	**173**	250	550	380	**493**	600	770

Equity/LTI format

Executives in the United States far more often than their peers in Europe say that receiving equity in their compensation packages is very important. So, it's not surprising that, in 2023, 76% of US respondents reported receiving annual equity/LTI, while 68% of European respondents reported the same—a jump from 57% in Europe in 2022.

Equity trends: United States and Canada (%)

Equity form

Restricted stock units (RSUs)
42

Combination of RSUs, PSUs, or options
36

Options
8

Performance share units (PSUs)
6

Other
9

Note: Numbers do not sum to 100%, because of rounding.

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 89

How important is receiving equity in your compensation package?
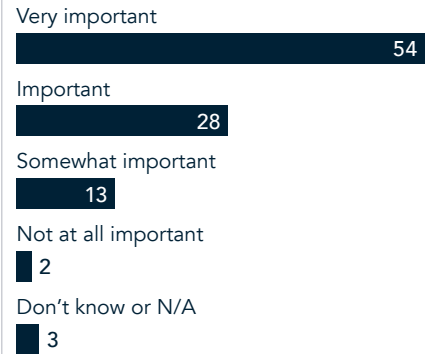
Very important
54

Important
28

Somewhat important
13

Not at all important
2

Don't know or N/A
3

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 106

Equity trends: Europe (%)

Equity form
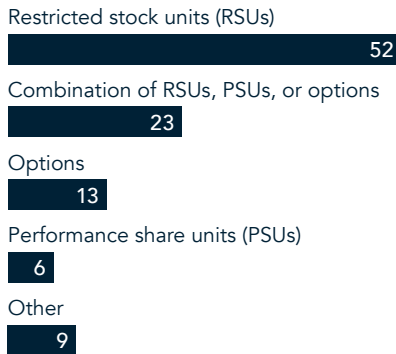
Restricted stock units (RSUs)
52

Combination of RSUs, PSUs, or options
23

Options
13

Performance share units (PSUs)
6

Other
9

Note: Numbers do not sum to 100%, because of rounding.

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 31

How important is receiving equity in your compensation package?

Very important
27

Important
32

Somewhat important
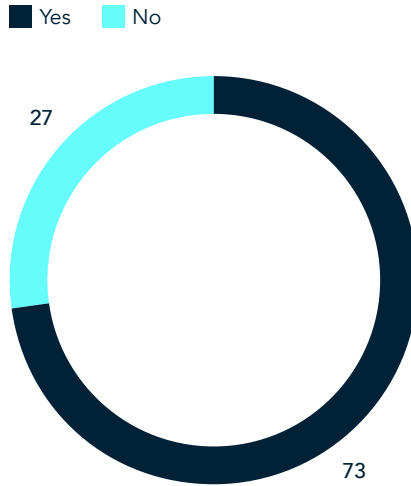24

Not at all important
17

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 41

Sign-on bonus

Seventy-three percent of US executives reported receiving some form of sign-on or joining bonus, while only 29% of those in Europe said the same.
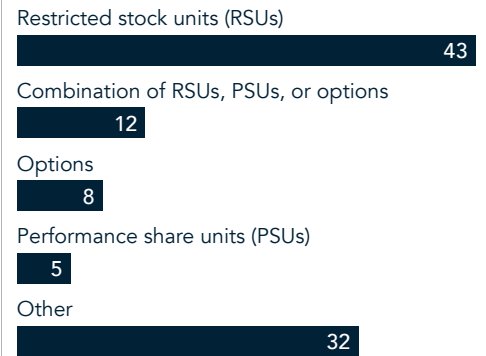
Joining and sign-on bonus trends: United States and Canada (%)

Did you receive a joining or sign-on bonus?

■ Yes ■ No

27

73

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 107

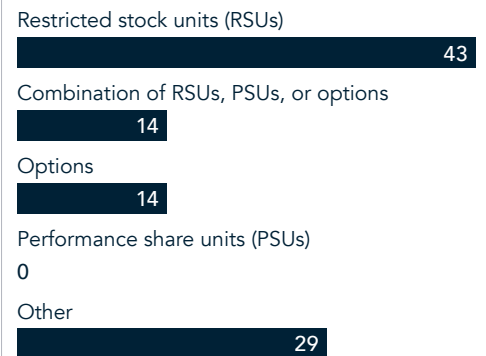**Sign-on equity form**

Restricted stock units (RSUs)	43
Combination of RSUs, PSUs, or options	12
Options	8
Performance share units (PSUs)	5
Other	32

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 60

Joining and sign-on bonus trends: Europe (%)

Did you receive a joining or sign-on bonus?
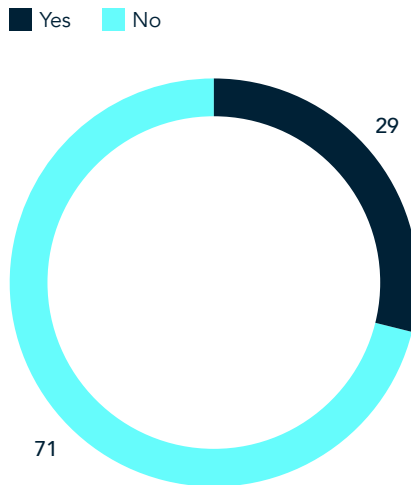
■ Yes ■ No

29

71

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 41

Sign-on equity form

Restricted stock units (RSUs)	43
Combination of RSUs, PSUs, or options	14
Options	14
Performance share units (PSUs)	0
Other	29

Source: Europe and US data, analytics, and artificial intelligence executive organization and compensation survey, 2023, n = 7

Executives at US technology and services companies by far saw the highest joining bonus in terms of equity, while those at consumer companies were offered the highest average cash total.

Joining bonus: United States (USD, thousands)

		Cash			Equity		
		25th	Avg	75th	25th	Avg	75th
	Overall (n = 60)	50	**165**	200	100	**1,471**	1,700
Industry	Financial services or fintech (n = 17)	50	**171**	200	100	**421**	800
	Technology & services (n = 18)	50	**164**	200	1,050	**3,307**	5,000
	Healthcare & life sciences or biotech (n = 7)	20	**107**	200	98	**1,433**	3,850
	Consumer (n = 12)	93	**243**	238	215	**1,330**	2,675
	Other (n = 6)	50	**65**	100	100	**514**	200
Company revenue	Less than $1.0bn (n = 13)	30	**71**	100	100	**1,833**	5,000
	$1.0bn–$4.9bn (n = 11)	60	**185**	200	120	**2,670**	5,000
	$5.0bn–$19.9bn (n = 12)	50	**123**	200	100	**717**	1,500
	$20.0bn–$50.0bn (n = 9)	130	**237**	250	200	**1,200**	1,700
	More than $50.0bn (n = 12)	35	**268**	450	100	**1,197**	1,500
Role tenure	Less than 1 year (n = 9)	30	**57**	100	100	**186**	300
	1–2 years (n = 24)	50	**162**	200	150	**1,097**	1,700
	3–4 years (n = 17)	80	**209**	200	125	**3,181**	5,000
	5 or more years (n = 10)	30	**195**	300	178	**593**	950
Team size	50 or fewer (n = 30)	40	**115**	200	100	**859**	500
	51 or more (n = 30)	80	**215**	250	500	**2,131**	2,100
US region	Northeast (n = 19)	50	**151**	200	150	**954**	875
	Mid-Atlantic (n = 5)	90	**250**	200	1,500	**1,700**	2,100
	Southeast (n = 7)	100	**159**	200	100	**1,187**	1,700
	Midwest (n = 9)	50	**210**	300	100	**1,073**	3,000
	Southwest (n = 7)	30	**71**	100	200	**200**	200
	West Coast (n = 10)	40	**215**	200	500	**2,742**	4,000

Specialty Practices

Heidrick & Struggles' Specialty Practices advise our clients on emerging technologies and disruptive innovation. Our search capabilities help the most innovative companies reach their ambitions for growth, scale, and brand impact, accelerating their paths to industry disruption.

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- Health Tech
- Industrial Tech

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Global

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