

Special Report

DATA AND ANALYTICS LEADERSHIP ANNUAL EXECUTIVE SURVEY 2023

EXECUTIVE SUMMARY OF FINDINGS

**Delivering Business Value from
Data and Analytics Investments**

With a Foreword by Thomas H. Davenport
and Randy Bean





FOREWORD

Shortly before the first NewVantage Partners survey of data and information executives in 2012, the venture capitalist Mark Andreessen wrote in the Wall Street Journal that “software is eating the world.” While it’s certainly true that the importance of software has grown in leading economies, one could easily argue that data is the primary driver of software’s growth. Data, and the ability to make sense of it, has been one of the greatest drivers of innovation in both business and society in recent decades, and a primary driver of economic success in the 21st century.

Indeed, the 11th survey in this series contains much evidence of data’s rise in importance within large corporations when compared to earlier surveys. Some of this change has taken place amazingly rapidly. The Chief Data Officer role has quickly become much more common over time and across more industries, as has the incorporation of analytics and AI into the role, and the prevalence of the Chief Data and Analytics Officer. There has been a pronounced shift to offense-oriented activities during this short period. The number of companies reporting measurable business value from data and analytics has grown enormously, and the investment in these resources continues to increase even during a potentially uncertain economic climate.

But these rapid changes in the importance of data stand in contrast to lack of progress — even regression in some cases — in other areas. The human side of data continues to challenge companies, and data leaders and the organizations that they serve appear reluctant to change their paradigms toward more emphasis on these issues. Every year in recent surveys, the great majority of respondents report that the principal challenges to becoming a data-driven organization are human—culture, people, process, or organization—rather than technological. And they make little progress toward that goal; this year less than a quarter of firms report a data-driven organization or data culture.

Yet it would appear that too much of the focus of data executives is on non-human issues — data modernization, data products, AI and ML, data quality, and various data architectures. Less than 2% of respondents ranked “data literacy” as their top investment priority. Could it be that we are leading the horse to water, but it isn’t drinking? Perhaps this accounts for the low level of overall success of the CDO/CDAO function found in the survey.

This is not to diminish the real progress made with data in organizations. The survey and our own observations indicate that data consumption has become much more of a focus in recent years, and that companies are using analytics and AI to deliver value from data. It’s clear that data is driving substantial amounts of business innovation. In the end, however, the ultimate value from data comes when people use it in decisions and actions. That is both a long game and a difficult one.

Thomas H. Davenport and Randy Bean

January 2023



INTRODUCTION

Data and analytics can be utilized by companies in ways that can transform industries. Organizations can make informed and hopefully better decisions using data, without having to rely exclusively on intuition.

Yet many organizations continue to struggle to deliver business value from their data and analytics investments. Turnover in corporate data and analytics leadership roles remains high.

Investments in data and analytics capabilities and initiatives are greater than ever, but organizations are coming to the growing realization that embedding these capabilities within their firms and transforming the cultures of their organizations will take time.

A new generation of data and analytics professionals are assuming data leadership roles. How ready are leading companies to make the changes and investments required to establish data leadership?

The central theme of NewVantage Partners, A Wavestone Company 2023 Data and Analytics Leadership Executive Survey is **Delivering Business Value from Data and Analytics Investments**.

If we are not delivering business value in some measurable form, what have we accomplished and what should we be doing as data and analytics leaders?

This year marks the 11th edition of this C-Executive survey, which was first published in 2012. The survey was launched in response to a constituency of Fortune 1000 business and technology C-Executives seeking to understand the transformational impact that data and analytics would have on their organizations and industry.

We are entering into the 2nd decade since data leadership roles such as the Chief Data and Analytics Officer have been widely embraced. How much progress has been made? What are the greatest challenges that remain? What are the obstacles to progress and success?

These are the central questions that we sought to provide insight into from this year's executive survey.

Here is a summary of the major takeaways from the 2023 Data and Analytics Leadership Annual Executive Survey:

- 1 Continued growth and commitment to data is reflected in record survey organization representation and record CDO/CDAO participation** – Participants in this year’s survey comprised data executives who served in CDO/CDAO and other executive data leadership positions with 116 Fortune 1000 companies or organizations during 2022, up 22% over last year’s survey, reflecting the continued growing commitment to data within industry.
- 2 Adoption of CDO/CDAO role is reflected in record CDO/CDAO participation** – of this year’s survey participants, 84.6% held the role of Chief Data Officer, Chief Data & Analytics Officer, or the most senior data leadership title within their organization, up 10% from last year and nearly 20% in five years, reflecting the continued growth and adoption of the CDO/CDAO role across organizations and industries.
- 3 Expansion of data and the CDO/CDAO role across industries and geographies is reflected in higher and more diverse industry and geographic participation** – While representation by leading financial services firms continues to be strong, representation of firms and organizations across industries is now higher than ever, with 42.7% of participants representing industries beyond financial services.

The diversification of industry participation is in contrast to the heavy concentration – 77.2% – of financial services participation as recently as five years ago, reflecting the growing embrace and adoption of data and the CDO/CDAO role across more industries, as well as more geographies. In addition, this year’s survey marks greater participation from global brands and internationally based businesses, as new CDO/CDAO communities emerge in Europe, Asia/Pacific, Africa, and Latin America.
- 4 The CDO/CDAO role has achieved critical mass as evidenced by widespread adoption** – In this year’s survey, 82.6% of organizations report having appointed a CDO/CDAO, a dramatic increase from the meager 12.0% of organizations that had appointed a CDO/CDAO when the survey was first conducted in 2012. This clearly reflects the trend to consensus adoption of the CDO/CDAO role across organizations and across industries.

5 Lack of clear expectations for the CDO/CDAO role contribute to lingering dissatisfaction as organizations struggle to deliver business value from their data investments – Only 40.5% of companies report that the CDO/CDAO role is well-understood within their organizations, while only 35.5% of organizations responded that the CDO/CDAO role is successful and well-established – an 11.6% decline in organizational satisfaction from last year. These results reflect both the newness of the role, as well as the lack of maturity and lack of clear expectations for the CDO/CDAO function.

6 The CDO/CDAO role is evolving and maturing as organizations strive to deliver business value from their data investments – Analytics is now a part of the CDO/CDAO role at 69.4% of organizations. The primary mandate of the CDO/CDAO is to develop the corporate data strategy at 48.1% of organizations. Most CDO/CDAOs – 43.3% – now report to the President/CEO or COO, and 55.6% report to a business rather than technology function, with just 27.4% still reporting to the CIO. This reflects a significant shift in how the role is perceived, and a commitment to ensuring the delivery of business value from the CDO/CDAO role.

7 Investments in data are growing and remain strong, even with potential economic headwinds – Organizations continue to invest in data, with 87.8% reporting increases in data investments during 2022, most notably in activities such as data modernization, which was identified as the top data and analytics investment focus by 40.7% of organizations. Looking ahead to 2023, 93.9% of organizations are planning to increase their investments in data in the wake of potential economic uncertainty, reflecting the continued perception that data is an essential business asset to organizations.

CDO/CDAOs and data leader executives again identified data modernization, meaning the transfer of data from outdated or siloed legacy environments to cloud-based environments, as their investment priority, with 82.0% of organizations planning to increase their investments in data modernization in 2023. Investment in data products and AI/ML were also indicated to be a priority, while investment in data mesh, data fabrics, and data literacy were less universal.

8 Becoming data-driven and building a data culture remain aspirational objectives for most organizations – Just 23.9% of companies characterize themselves as data-driven, and only 20.6% say that they have developed a data culture within their organizations, reflecting that becoming data-driven is a long and difficult journey that organizations increasingly recognize playing out over years or decades.

9 Cultural factors continue to be the greatest obstacle to delivering business value from data investments – The vast majority of data leaders – 79.8% – continue to cite cultural issues – organizational receptivity to change and business transformation, changes to organizational processes, people and skills, organizational alignment, and communications – as the greatest obstacles to realizing business value, reflecting that change is seldom easy, and organizational transformation tends to move slowly.

Yet, investment in people skills such as building data literacy, remain low – just 1.6% cited this as their top investment priority. A sign of hope is that 70.9% of CDO/CDAOs and data leaders report that their firms are receptive to change and organizational transformation.

10 Companies continue to fall short in attention and commitment to data ethics policies and practices – Data ethics remains an issue of concern for data leaders as only 23.8% of companies report they are doing enough to ensure responsible and ethical use of data within their organizations and the industry.

The following pages present the findings of this year's survey in detail. We hope that you find this year's results insightful and thought-provoking.

Thank you to all of the CDO/CDAOs and data leaders who participated in this year's survey. Your experiences and knowledge have made this survey a true benchmark for the data and analytics industry for over a decade now. We are humbly grateful for your participation!



2023 PARTICIPANT SUMMARY

This year's survey featured a record level of participation. Data executives who served in executive data leadership positions with 116 diverse Fortune 1000 and leading organizations during 2022 participated in this year's survey - up 22% over last year's survey.

Summary of 2023 executive survey participants by industry segment

Industry Participation	2018	2019	2020	2021	2022	2023
Financial Services	77.2%	73.8%	67.1%	66.3%	60.0%	57.3%
Healthcare Life Sciences	8.8%	16.6%	25.6%	21.8%	21.0%	16.1%
Retail/Consumer Goods (CPG)					8.0%	9.7%
Media/Entertainment					2.0%	4.8%
All Other Industries	14.0%	9.6%	7.3%	11.9%	9.0%	12.1%

This year's survey was also notable for constituting the most diverse collection of data leaders yet in terms of industries represented, with growing representation across industry sectors such as healthcare and life sciences, retail and consumer packaged goods, media and entertainment, and other sectors ranging from government to professional sports to high tech, telecommunications, and manufacturing, in addition to continued strong representation from financial services leaders.

It is also noteworthy that an increasing number of the 2023 survey participants represent global or internationally based companies, as is evidenced by the participating organization list on the following pages.

Summary of 2022 executive survey participants by Respondent Role

Respondent Role	2018	2019	2020	2021	2022	2023
Data/Analytics Leadership CDO CDAO	70.9%	74.8%	73.2%	76.0%	77.0%	84.6%
Technology Leadership CIO CTO	13.9%	17.3%	21.9%	12.0%	14.0%	8.0%
Business Leadership CEO COO	5.6%	2.5%	2.4%	2.0%	4.0%	1.6%
Digital/Marketing Leadership	2.8%	4.9%	1.2%	3.0%	1.0%	2.4%
Other Executive	6.9%	2.5%	1.2%	7.0%	4.0%	3.4%

Survey respondents constitute the most senior corporate executives with oversight and responsibility for data and analytics initiatives within their respective firms.

Of the executive participants, 84.6% held the role of Chief Data Officer, Chief Data & Analytics Officer, or the most senior data leadership title within their organizations – a 10% increase in representation by CDO/CDAO executives over the previous year.

Summary of 2023 executive survey participants by professional background and experience:


Professional Background/Experience	2023
Business	27.9%
Technical	37.7%
Analytic	34.4%

This year, for the first time, we asked data leaders about their professional background and experience. At a moment when leading companies are looking to ensure the delivery of business value from their data investments, it is noteworthy that the majority of CDO/CDAOs and data leaders come from technical and analytics backgrounds – 72.1%, rather than business backgrounds – 27.9%. It is also worth noting that technical expertise – 37.7% – predominates over analytics and business expertise – 62.3%.

Although no generalized assumptions can be drawn from this data, it does point to the need for CDO/CDAOs and data leaders to understand the business drivers that they seek to support through their organizations' investments in data and analytics. It will be increasingly incumbent upon data leaders to speak the language of the business and communicate in business terms that business leaders understand.


2023 EXECUTIVE SURVEY PARTICIPATING FIRMS

Survey participation increased by 22% for the 2023 executive survey, representing our highest participation level since inception of the survey in 2012. Participants held data and analytics executive leadership positions with 116 firms during 2022, as highlighted here:



FINANCIAL SERVICES

AIG	Farmers Insurance	Mass Mutual	TD Bank
Ally Financial	Fidelity Investments	Mastercard	Thrivent
American Century	First Rand Bank	MetLife	TIAA Nuveen
American Express	First Republic Bank	MFS	Travelers
Apollo Global	Freddie Mac	Morgan Stanley	Truist
Bank of China	Grupo InterCorp	Morningstar	UBS
Bank of Montreal	Hanover Insurance	Nationwide	USAA
Bank of the West	The Hartford	New York Life	Vanguard
BNP Paribas	Huntington Bank	Northwestern Mutual	Virgin Money
BNY Mellon	Invesco	PNC Bank	VISA
Bread Financial	JP Morgan Chase	Prudential	Voya
Capital Group	KeyBank	Regions Bank	Webster Bank
Cerberus	Lending Tree	Scotia Bank	Wells Fargo
Charles Schwab	Liberty Mutual	Silicon Valley Bank	Zions Bank
CitiGroup	Lincoln Financial	State Farm	
Citizens Bank	London Stock Exchange	State Street	
Credit Suisse	M&T Bank	Sumitomo Mitsui Bank	
Discover	Marsh	SunLife Financial	



RETAIL/CONSUMER GOODS (CPG)

Albertsons	Consumer Reports	Levi Strauss	Richemont
Best Buy	Estee Lauder	Pepsi Cola	Schnucks Markets
Colgate Palmolive	Kimberly Clark	Procter & Gamble	



HEALTHCARE/LIFE SCIENCES

Abbvie	Squibb	Mayo Clinic	Sanofi
Akron Childrens Hospital	Cardinal Health	Novartis	Zoetis
Astra Zeneca	Cerevel	Optum Health	
Blue Cross MA	Cigna	Otsuka Pharmaceutical	
Bristol-Meyers	Eli Lilly	Parexel	
	Humana	Pfizer	



MEDIA/ENTERTAINMENT

Bloomberg	Creative Artists Agency	Universal Music Group
Consumer Reports	McGraw Hill	



PROFESSIONAL SPORTS

Boston Red Sox	NFL
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GOVERNMENT

US Coast Guard	The White House
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ADDITIONAL INDUSTRIES

ADP	Emirates	Stanley Black & Decker	University of Phoenix
BAE Systems	Global	TransUnion	Verizon
Bridgestone America	Hewlett-Packard	Unifirst	

INVESTMENT

Investment in corporate data and analytics initiatives remains strong and continues to grow, albeit at slightly lower levels.

Increase Investment in Data	2021	2022	2023	Next Year
Investment Is Increasing	91.9%	91.7%	87.8%	83.9%
Investment Is Not Increasing	8.1%	8.3%	12.2%	16.1%

For 2022, 87.8% of organizations reported that investment in data and analytics increased. This is consistent with the high level of increasing investment in data and analytics over the past several years.

When asked about continued increase in investment in 2023, a slightly lower percentage – 83.9% of executives – indicated that their organizations would be increasing investment in data and analytics, in spite of potential economic uncertainty.

Support for increased investment in data and analytics is robust.

Primary Area of Data Investment	Ranked	2023 Investing
Data Modernization	40.7%	82.0%
Data Products	17.9%	79.7%
AI/ML	16.3%	80.5%
Data Quality	10.6%	78.7%
Data Mesh/Fabrics	7.3%	41.5%
Data Literacy	1.6%	54.9%
Other	5.6%	N/A

This year, we asked CDO/CDAOs and data leaders about which areas of data and analytics would be receiving the greatest investment during 2023.

Data modernization was identified by 40.7% of data leaders as the primary beneficiary of data and analytics investment in 2023. In addition, 82.0% of executives responded that their organization would be investing in data modernization efforts in 2023.

The development of data products was highlighted as the second highest area of data and analytics investment priorities, with 17.9% of organizations indicating that investment in data products was their highest data and analytics investment priority, and 79.7% of organizations increasing their investment in data products in 2023.

Investment in AI/ML was also identified as an area of investment prioritization, with 16.3% of executives highlighting this as their highest investment priority during 2023, and 78.7% indicating that this will be an area of increased data and analytics investment during 2023.

Rounding out the 2023 data and analytics investment picture, 10.6% of organizations ranked data quality as their highest investment priority, with 41.5% indicating that they would be increasing investment in data quality during 2023.

In spite of ongoing interest in areas such as data mesh, data fabrics, and data literacy, a much smaller set of organizations identified these areas as their highest data and analytics investment priority, and a much lower percentage of firms indicated that they plan to increase investment in these areas during 2023.

Data modernization is the clear focus of corporate data and analytics investment in 2023.



RESULTS

Data and analytics executives report that they are delivering business value from their corporate data and analytics investments, with growing optimism as capabilities mature.

Measurable Business Value from D/A Investments	2017	2020	2022	2023	Next Year
Yes	48.4%	70.3%	92.1%	91.9%	98.2%
No	51.6%	29.7%	7.9%	8.1%	1.8%

This year, 91.9% of CDO/CDAOs and data leaders stated that their firms had delivered measurable business value from data and analytics investment, consistent with last year’s reporting, and up dramatically from five years ago when only 48.4% of organizations reported seeing a measurable return. The growing optimism of data leaders is reflected in the projection that 98.2% of firms would see a return on their investments in 2023.

Progress of Data and Analytics Aspirations	2019	2020	2021	2022	2023
Driving Business Innovation with Data	59.5%	64.2%	48.5%	56.5%	59.5%
Competing on Data and Analytics	47.6%	45.1%	41.2%	47.4%	40.8%
Managing Data as a Business Asset	46.9%	50.0%	39.3%	39.7%	39.5%
Created a Data-Driven Organization	31.0%	37.8%	24.0%	26.5%	23.9%
Established a Data Culture	28.3%	26.8%	24.4%	19.3%	20.6%

The optimistic outlook for delivering business value from data and analytics investment contrasts with the long-term progress of organizations in achieving their aspirations of becoming data-driven businesses with an established data culture. Companies continue to make little progress toward these long-term goals, which underscores the challenges that large, complex organizations continue to face when it comes to taking full advantage of data and analytics capabilities.

The pattern of slow or negative progress is consistent across objectives. Less than half of organizations report that they are currently competing on analytics – just 40.8%; managing data as a business asset – only 39.5%; have created a data-driven organization – a meager 23.9%; or established a data culture – a dismal 20.6%.

Becoming data-driven is a long-term journey, and organizations continue to struggle to make substantive progress toward achieving this outcome.

CHALLENGES

While organizations point to widespread delivery of business value from data and analytics investments, businesses continue to struggle with fundamental structural issues and barriers to success due to the need for long-term organizational transformation and organizational and business process change.

Principal Challenge to Becoming Data-Driven	2018	2019	2020	2021	2022	2023
Cultural People Process Organization	80.9%	92.5%	90.9%	92.2%	91.9%	79.8%
Technology Limitations	19.1%	7.5%	9.1%	7.8%	8.1%	20.2%

Cultural impediments continue to represent the greatest obstacle to corporate goals of achieving a data-driven organization and establishing a data culture within the firm. While there appears to be some improvement over time, an overwhelming majority – 79.8% of data executives and business leaders – cite cultural impediments – people, business process, organizational alignment – as the primary barrier to data-driven organizational transformation.

The results suggest that organizations have not made substantial progress in addressing the cultural issues during the past five years. These findings reflect the difficulty of change and business transformation, especially in the case of large, legacy organizations which have complex structures and operating practices in place that require transformation over years and decades.



Interestingly, a clear majority of organizations – 70.9% – report that their firms have a business culture that is receptive to change and organizational transformation. This should be viewed as a reason for optimism for CDO/CDAOs and data leaders who are committed to the long haul, and a source of encouragement to data professionals looking ahead to decades in the data profession.

LEADERSHIP

Fortune 1000 companies and data leaders across industries have been undertaking a decade-long transformation in how they manage data and analytics as an organizational asset. Following the financial crisis of 2008-2009, leading banks appointed Chief Data Officers (CDO) in a chiefly “defensive” capacity to interface with regulators and ensure compliance with financial reporting mandates.

The evolution of the CDO role in the ensuing decade and a half has been integral to the adoption and application of data and analytics among leading corporations and organizations. The CDO role has evolved to incorporate analytics responsibilities, as the focus has evolved toward more “offensive” activities relating to revenue growth, business expansion, and customer acquisition and servicing.

While adoption of the CDO/CDAO role has become the norm across industries and geographies over time, organizations continue to struggle to make the role effective. Leading companies continue to shape and redefine the roles and responsibilities of the CDO/CDAO, as well as determining where in the organization the CDO/CDAO should report.

Turnover in the CDO/CDAO role remains high, with average tenures in the 20-24- month range, even though more CDO/CDAOs than ever now occupy a seat at the most senior level decision-making bodies of leading corporations.

The CDO/CDAO role is, and will continue to be, a transformational role for Fortune 1000 companies and leading organizations. Any new leadership role will take time to evolve into its eventual optimal function. Organizations need to recognize the nascent nature of the CDO/CDAO role. We are still in the early stages of definition and adoption.

This year’s survey provides some compelling insights into the evolution of the CDO/CDAO role in recent years, and where we are likely headed in the coming years.

CDO/CDAO Appointed	2012	2017	2021	2022	2023
Yes	12.0%	55.9%	65.0%	73.7%	82.6%
No	88.0%	44.1%	35.0%	26.3%	14.4%

As noted, adoption of the CDO/CDAO role has risen sharply since this survey was first conducted in 2012. At that time, just 12.0% of the Fortune 1000 and leading companies that were surveyed responded that they had appointed a CDO. This year, a record 82.6% of organizations reported that the CDO/CDAO function was now in place at their organizations.

Even as the CDO/CDAO role has achieved general adoption, the role remains volatile and a challenging position, still early in its evolution, and still struggling to find its footing in the corporate C-suite.

Being a new corporate function and role for Fortune 1000 companies, firms continue to reassess and determine what is the most optimal organizational placement for the CDO/CDAO role within their organizations.

In the earliest days, there was general agreement that the CDO function was best suited to fit within the Chief Information Officer (CIO) organization; some companies placed this role within the Chief Financial Officer (CFO) or other corporate functions. This view has shifted in recent years, as evidenced in this year's survey.

CDO/CDAO Reporting Relationship (2023)

President CEO	Chief Operating Officer (COO)	Chief Information Officer (CIO)	Chief Financial Officer (CFO)	Chief Digital Officer	Other
15.0%	28.3%	27.4%	3.5%	8.8%	17.0%

As firms seek to align the data and analytics function more closely with line-of-business activities and align investments in data and analytics capabilities with measurable business outcomes, there has been a notable shift in where in the organization the CDO/CDAO should report.

It is noteworthy that in this year's survey, a significant 43.3% of CDO/CDAOs now report to the President/CEO or Chief Operating Officer (COO) of the firm, and that a majority – 55.6% – of CDO/CDAOs appear to report to business rather than technology functions.

This represents a notable change in how the CDO/CDAO role has come to be viewed within companies and reflects the growing perception that data and analytics are primarily a business function, with business accountability and responsible for delivering business value.

Primary CDO/CDAO Responsibility (2023)

Data Strategy	Analytics	Data Governance	Data Management	Business Use Cases	Other
48.1%	16.0%	14.1%	12.3%	4.8%	4.7%

Most CDO/CDAOs and data leaders this year – 48.1% – responded that developing and executing the data strategy for the organization is their primary responsibility. Other areas of primary responsibility for CDO/CDAOs include analytics – 16.0%, data governance – 14.1%, and data management – 12.3%. Organizations continue to define and refine the CDO/CDAO role.

The CDO/CDAO role continues to evolve as organizations struggle to deliver sustainable business value from their data and analytics investments. As the role evolves, the role and responsibilities, as well as the required skills to become a CDO/CDAO are changing.

Analytics Part of CDO/CDAO Function (2023)

Yes
69.4%

No
30.6%

One of the most notable changes in recent years has been the expansion of the CDO role in many organizations to encompass analytics and AI, resulting in the CDAO function. As companies focus on delivering measurable business value from their data investments, analytics are increasingly being seen as a natural element and extension of CDO responsibilities, with 69.4% of organizations responding that analytics is now part of the Chief Data Officer role within their organization.

CDO/CDAO Skill Set	2022	2023
Data Analytics Data Science	44.3%	42.9%
Data Management Data Governance	29.1%	33.3%
Other	26.6%	23.8%

It is therefore not surprising that analytics skills – 42.9% – have surpassed data management and data governance skills – 33.3% – as the primary prerequisite for the CDO/CDAO role. This incorporation of analytics skills and experience into the CDO function represents a notable change for many organizations that were early adopters of the CDO position.

The evolution of the CDO role to incorporate analytics responsibilities and skills underscores the extent to which companies are refocusing the CDO role to become more analytics- and business results-driven, as these organizations strive to deliver business value from their data and analytics investments.



PROGRESS

Becoming a data-driven organization requires time, persistence, and relentless execution and focus. Those organizations that commit to the course while adapting over time tend to prevail – fail fast, learn faster. Change often comes slowly, however.

We have noted that organizations must be receptive to change if they intend to make serious progress. Large, legacy businesses don't easily change overnight. It is always a journey that unfolds over time, with progress and setbacks along the way.

Primary Responsibility for Data in Firm	2019	2020	2021	2022	2023
Chief Data/Analytics Officer	48.1%	40.2%	49.5%	52.0%	54.2%
Chief information Officer	4.9%	11.0%	12.1%	12.5%	12.5%
No Single Point of Accountability	28.4%	26.8%	24.2%	21.8%	18.3%
Business Head				4.1%	5.0%
Other Executive	18.6%	12.0%	14.2%	9.6%	10.0%

While certain things can be changed with relative ease, sometimes it is the case that the times change, but some things remain the same.

One prominent example as it relates to data leadership is the question of who has principal executive responsibility within a company or organization. Creation of the Chief Data Officer role has been in any effort on the part of many organizations to centralize data strategy and data policy making decisions under a single C-executive function. This continues to be an uncertain outcome, however.

Just over half of organizations – 54.2% – report that the CDO/CDAO has primary responsibility for data within their company, a number that has increased only slightly during the past five years. There has been some improvement in the percentage of firms that indicated that there was no single executive within the firm that has responsibility for data – a decrease from 28.4% five years ago to 18.3% this year. A relatively small but steady percentage of organizations – 12.5% – continue to place corporate responsibility for data within the Chief Information Officer function.

Primary Focus of the CDO/CDAO	2020	2021	2022	2023
Offense Growth Innovation	54.6%	70.1%	64.3%	61.8%
Defense Regulatory Efficiency	45.4%	29.2%	35.7%	38.2%

The stated objective of many companies is to deliver business value from their data investments. For some organizations, this has meant focusing the CDO/CDAO on revenue-generating and business growth activities – “offense”. While a majority of data executives – 61.8% – report their primary focus is on “offense”, this number has not changed much, and “defense” activities continue to be a primary focus for many organizations – 38.2%.

One of the single most important lines of questioning in this year's survey was about the ultimate effectiveness and success of the CDO/CDAO role. As discussed in this report, and in articles that we have published on the topic of short CDO/CDAO tenures and why the job is so hard, we wanted to gain additional insight into this issue of CDO/CDAO stability and success.

CDO/CDAO Role Well-Understood in Company (2023)

Yes
40.5%

No
59.5%

Perhaps the single most notable new insight in this year's survey relates to the question of whether the CDO/CDAO role is well understood by companies. It is notable that well under half of organizations – 40.5% – reported that the CDO/CDAO role is well understood within their firms.

This finding highlights the challenges that companies, and data leaders, face in gaining traction, building trust, establishing credibility, and delivering business value from data and analytics initiatives.

This lack of a clear understanding of the CDO/CDAO role undoubtedly contributes directly to the short tenures, turnover, and instability of the role since its inception over a decade ago.

CDO/CDAO Tenure/Turnover	2022	2023
Firm Has Had 1 CDO/CDAO	56.8%	57.1%
Firm Has Had 2-4 CDO/CDAOs	37.8%	33.3%
Firm Has Had 5+ CDO/CDAOs	5.4%	5.7%

Given the lack of understanding of the CDO/CDAO role, it may be surprising that over half of organizations – 57.1% – have employed a single CDO/CDAO. It should be noted, however, that many of these organizations only appointed their first CDO/CDAO within the past couple of years. Among organizations that have a longer history with the CDO/CDAO role, turnover continues to be a challenge – 42.9% of firms reported 2-5+ CDO/CDAO incumbents.

Success of the CDO/CDAO Role	2020	2021	2022	2023
Successful and Established	27.9%	33.3%	40.2%	35.5%
Nascent and Evolving	49.1%	48.8%	42.7%	49.1%
Struggling with Turnover	23.0%	17.9%	14.6%	12.7%
Failure			2.5%	2.7%

It follows logically then that only 35.5% of companies report that their firm has been very successful in establishing the CDO/CDAO function, while 64.5% report that their organization continues to struggle in various ways to make the CDO/CDAO role successful.

ETHICS

We have seen from this year's survey findings that companies are increasing their investments in data and analytics, that the role of the CDO/CDAO is achieving widespread adoption, and that organizations are seeking to derive business value at every stage from their data and analytics investments.

Companies are also struggling to build data-driven organizations, establish a business culture where data is highly valued and deeply embedded within the fabric of the organization, and consolidate data leadership at a corporate level under the auspices of the CDO/CDAO.

All of these data and analytics initiatives move forward within a context of expected data responsibility. For organizations to establish and maintain the trust of their employees, customers, and stakeholders, these businesses must follow a set of practices that ensure that data is always used in a responsible manner.

It is therefore essential that corporations establish the necessary policies, guidelines, and practices to ensure the ethical use of data, analytics, and AI in order to safeguard their brands and reputations.

The State of Data Responsibility and Data Ethics	2022	2023
Well-Established Policies & Practices In Place	44.2%	40.2%
Industry Has Done Enough to Address Data and AI Ethics	21.6%	23.8%

Based on the responses of these corporate data and analytics leaders, much work remains to be done.

One year ago, only 44.2% of data executives reported that their organizations had developed and implemented well-established, well-understood, and well-executed standards and practices for data and AI ethics, and just 21.6% stated that the industry had standards and practices in place for data and AI ethics – 78.4% did not!

One might have hoped to see improvement in this area of responsible and ethical use of data and AI, and data trust. Sadly, this year's survey shows no meaningful improvement, as only 40.2% of data leaders reported that their organizations had made progress in establishing policies and practices for ethical data and AI use, a 9.0% decline from last year, and just 23.8% stated that the industry had undertaken actions to ensure responsible data and AI ethics. 76.2% say that their industry has still not done enough!

Looking ahead to 2023, we hope that in the coming year more companies will undertake actions to ensure that well-established, well-understood, and well-executed data and AI ethics standards and practices are initiated and implemented. As data and analytics adoption grows, having the necessary ethical safeguards in place becomes more important than ever. It is our responsibility as data leaders to champion these efforts.



ABOUT NEWVANTAGE PARTNERS, A WAVESTONE COMPANY

For two decades, since its founding in 2001, NewVantage Partners (NVP) has served as strategic advisors in data-driven business leadership to a blue-chip roster of Fortune 1000 companies and industry leaders. Our clients have included leading financial services and life sciences firms, and data-intensive firms across many industries.

Now, NewVantage Partners has been integrated into Wavestone, a leading global consultancy headquartered in Paris, France which acquired NewVantage Partners in December 2021. Going forward, Wavestone will build upon these foundations to deliver leading-edge expertise in data strategy, data governance, data management, and data security. Wavestone's commitment to data leadership is stronger than ever.

Industry Thought Leadership

NewVantage Partners industry thought-leadership perspectives have appeared in leading publications, including *Harvard Business Review*, *MIT Sloan Management Review*, *Forbes*, *The Wall Street Journal*, and *CDO Magazine*, and through an annual Data and Analytics Executive Survey, exclusive CDO/CDAO Thought-Leadership Roundtable events, industry keynote panels and speaking engagements, and the publication of *Fail Fast, Learn Faster: Lessons in Data-Driven Leadership* <https://www.failfastlearnfaster.org/>.

Selected Articles

Harvard Business Review

- Why Your Company Needs Data Product Managers. October 13, 2022.
- Why Becoming a Data-Driven Organization is So Hard. February 24, 2022.
- Why Do Chief Data Officers Have Such Short Tenures? August 18, 2021.
- Legacy Companies Need to Become More Data-Driven - Fast. June 15, 2021.
- Are You Asking Too Much of Your Chief Data Officer. February 7, 2020.

MIT Sloan Management Review

- Developing Successful Data Products at Regions Bank. November 10, 2021.
- AI-Based Innovations at Mayo Clinic. August 8, 2022.

Forbes

- How Colgate-Palmolive Is Using Data and Analytics. November 1, 2022.
- JPMorgan Chase's Delivery of Customer and Business Value from Data Investments. August 17, 2022
- How Levi Strauss Became A 21st Century Global Data and AI Leader. May 19, 2022.
- How The Pentagon Chief Data Officer and His Unit Are Taking the Beach. June 14, 2021.



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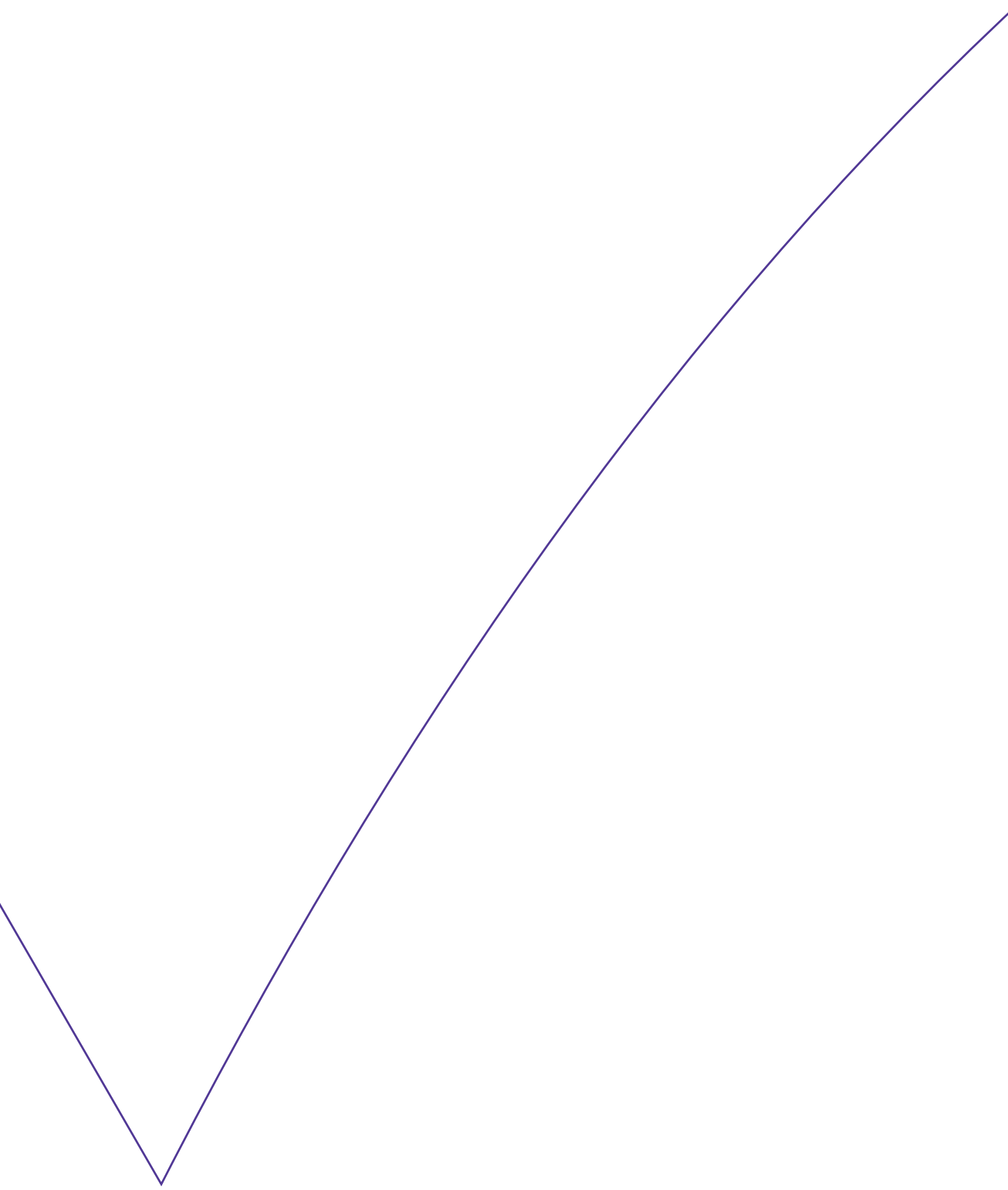
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To learn more about our
Data and AI Leadership
Executive Survey, visit us at
www.wavestone.us to see
what we can do for you.



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In a world where knowing how to drive transformation is the key to success, Wavestone's mission is to guide large companies and organizations in their most critical transformation projects. Dedicated to forward thinking and state-of-the-industry solutions, we are always expanding our knowledge and skills so we can deliver outstanding impact for our clients. Our ambition is to deliver a positive outcome for all stakeholders. That's what we call "**The Positive Way.**"

Wavestone is a leading independent player in the European consulting market, with 3,500 employees across 12 countries. Our global reach and expansion in the US and Asia especially position us to support worldwide business initiatives. Wavestone is also listed on Euronext Paris and is recognized as a Great Place To Work®.