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Global IDO Survey Report 2022

FY21/22 Report

MAKING AN IMPACT THAT MATTERS since 1845

Contents

Introduction

To an ever-increasing extent, organisations in both the public and private sectors are recognising the essential need for data and analytics for making rapid, confident and well-informed decisions in a dynamic business environment. New business models have emerged that use data analytics to help drive the organisation forward. However, we understand that progress towards creating Insight Driven Organisations (IDOs) is uneven with many challenges and barriers to overcome. At Deloitte, we aim to understand how much progress has been made, and how the challenges are being met. In 2017, the first IDO Survey was launched in the UK to research the priorities and ambitions of organisations in the field of data analytics.

This report is based on responses to our most recent (2022) survey from 263 client organisations of different sizes around the world and from a range of industry sectors, and provides insight into current developments. It focuses on two key themes: the first lens looks at the strategies that organisations are developing in their transition to becoming insight-driven; the need for data skills; the scale of AI in practice; and the process barriers that limit the generation of analytical insights. The second lens looks at the data challenges and technological ecosystem in use. Our findings reveal differences in the measures that organisations are taking, and this can provide benchmarks for comparison and evaluation. This will help you assess whether your organisation might be at the forefront of change to win competitive advantage or whether your measures for transformation are lagging behind.

We thank our respondents for their willingness to share their journeys with us. As ever, we hope that the results of this survey will help you ask the right questions, assess your current data, analytical and AI capabilities, and make the competitive advantage yours.

Methodology

This is the fourth IDO Survey released by Deloitte, conducted online in the first half of 2022. Over 260 respondents participated globally, from across a range of industries, organisation sizes, and countries.

Our respondents are senior leaders with decision-making responsibility for their data, analytics and AI organisations, based across Australia, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Italy, UAE, New Zealand, Peru, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

To join our panel of respondents for next year or for more information, please contact Natalie Williams at natalwilliams@deloitte.co.uk

Natalie Williams
Partner, Deloitte Consulting
IDO Proposition Lead

"Becoming an Insight Driven Organisation and embedding data, analytics and digital capabilities and culture across your organisation is a multi-stage journey. Many of our clients are at varying levels of maturity in this journey, be that due to macro / industry trends, executive sponsorship, investment, or other levers. We created the IDO Survey to help organisations benchmark themselves along this journey, so leaders who have the data, analytics and digital mandate can consider where they might be racing ahead to gain competitive advantage, or where they might be under-leveraged or under-scaled against their business case or transformation programme..."

Respondents

Who took the Global Insight Driven Organisation Survey?

The Global Insight Driven Organisation Survey FY2021/22 was run in the first half of 2022, with respondents based across Australia, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Italy, UAE, New Zealand, Peru, Portugal, Spain, Sweden, Switzerland, and the United Kingdom. As seen in figure 1, the majority of survey respondents' organisations operate in Europe, with over one in four having global market reach.

Responses to the survey also came in from a diverse range of organisations in terms of financial revenue and turnover: smaller organisations with annual revenues of 50 million USD or below represented 21 per cent of all respondents, mid-sized organisations with annual revenue between 50-500 million USD represented 22 per cent of responses, and large organisations with an annual revenue of 500 million USD and above comprised 42 per cent (figure 2).*

Figure 1. Geographic coverage of organisations' business coverage (Deloitte IDO Survey 2022)

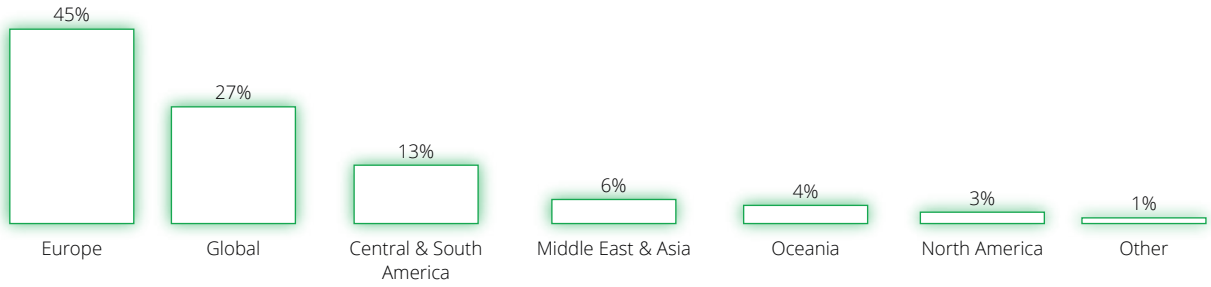
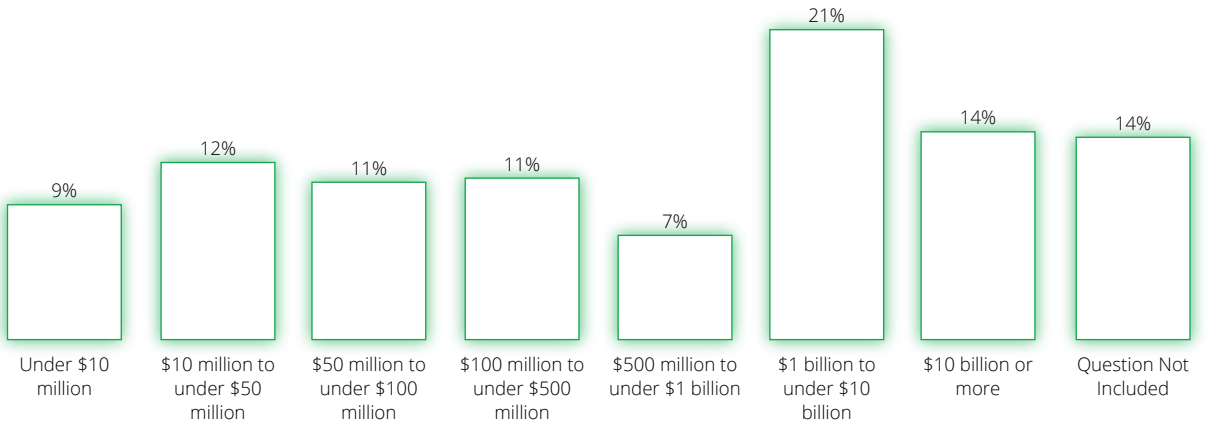


Figure 2. Organisation size (Deloitte IDO Survey 2022)



*Please note, figure 2 does not include responses from 14% of respondents due to a survey prerequisite to remove this question from a select number of Deloitte member firms for data collection purposes

The largest proportion of our respondents were from Financial Service organisations (29%). Private Sector responses in particular were split across Consumer Business (19%), Energy, Resources & Industrials (12%), Technology, Media & Telecom (10%) and Life Sciences & Healthcare (3%), representing a total of 44 per cent of all respondents, as per figure 3.*

35 per cent of all respondents, as per figure 4, noted that they held the position of a C-level officer in their organisation, followed by Managers (19%), Head of Business Unit/Department (16%) and Director/Managing Director (15%). This demonstrates the wide range of respondents that took part in this year's survey, providing their unique perspective into how their organisation currently operates against that of an Insights Driven Organisation.

Figure 3. Organisation Industries (Deloitte IDO Survey 2022)

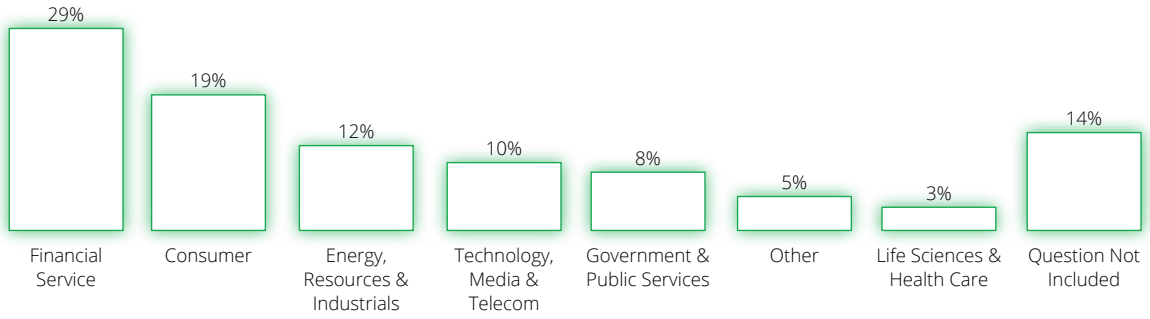
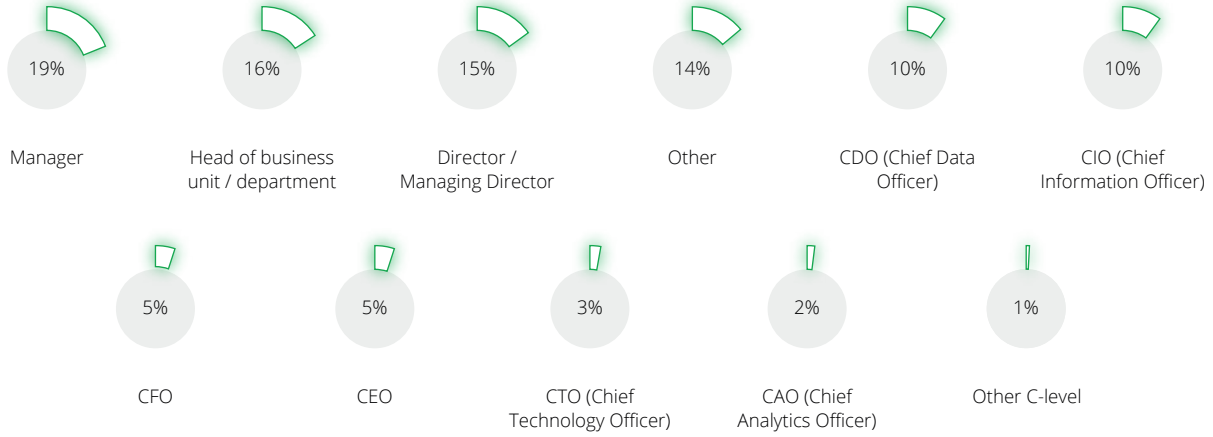


Figure 4. Current Job Title of Respondents (Deloitte IDO Survey 2022)



*Please note, figure 3 does not include responses from 14% of respondents due to a survey prerequisite to remove this question from a select number of Deloitte member firms for data collection purposes

Strategy

Investment plans & responsibility for data, analytics & AI

The future of business and society in general will be shaped by data, analytics and artificial intelligence, and organisations will need to go through a transition to adapt to the changing environment in order to survive and thrive. The transition can be gradual, and organisations are at different stages in their journey and at different levels of analytical maturity. They should assess where they need to go, how much further they need to go to get there, and the steps they need to take to become a more Insight Driven Organisation.

Investment Plans

We asked our respondents about their investment plans over the next 12 months. Not surprisingly perhaps, many respondents plan to improve their data and analytics capabilities and increase investment. The investments that are planned will vary with the data maturity of the organisation, but a general aim, as shown in figure 5, appears to be the development of a data, analytics and/or AI strategy. Other key aims are to support a drive towards digital and business transformation, an upgrade in infrastructure (which may be held back by limited investment) and an improvement in data governance and privacy.

Figure 5. Top areas of investment for the upcoming year (Deloitte IDO Survey 2022

45%
Developing or re-developing data, analytics and/or AI strategy

43%
Supporting business/ digital transformations

32%
Improving data governance, privacy and security

31%
Upgrading our infrastructure, systems and environments

Consider collaboration tools, pivot business models and focus on digital transformation

- Reduce employee fatigue by rearchitecting collaboration tools, workspaces and processes to match new hybrid work environment
- Increase visibility into employee sentiment and experience as employees adopt modern technology advancements
- Improve endpoint performance and IT support
- Pivot business models to capture market share from customer behaviour changes due to remote working
- Adopt virtual first and remote first architectural principles
- Provide tools for teams to rapidly develop and improve customer facing technologies
- Enhance the experience – remove friction in digital interactions for both customers and employees
- Adapt multi-disciplinary operating models and upskill in data and digital capabilities. Prepare your ability to be able to pivot analytic operating models seamlessly through the inevitable shift towards distributed everything

Invest in the right technology to enable data capture, remote collaboration and improve data analytics

- Invest in edge computing skills and teams across your data and analytics personnel
- Focus on data management, IoT and processing outside of the cloud and closer to the edge
- Embrace the Metaverse and Virtual Reality (VR)
- Investment plans should focus on cloud hosted workplace technologies leveraging platform, infrastructure and software as a service, unified endpoint management, and desktop as a service (DaaS)
- 5G coverage and bandwidth across IoT enabled assets – improve network connectivity and latency whilst continuing investments in cybersecurity
- Focus on vendors and tech that can assist in managing on location edge computing, shifting AI closer to the edge
- Enable business innovation by reorientating IT teams to collaborate in the delivery of self-service platforms

Deloitte IDO Playbook, 2022

An Insight Driven Organisation

An IDO leader will ask themselves key questions when evaluating a new analytical initiative

Market Conditions

To what extent will this investment make us **more agile** to respond to changing market conditions?

Scalable

How does the initiative improve our **enterprise-wide** analytical capabilities **at scale?**

Data & Technology

Does the **right data** exist? If not, can we get it or create it? Is the data timely, consistent, accurate and complete?

Is the **technology reliable**? Is it cost effective? Can it be **scaled** and **distributed** across my enterprise?
Is this the **right approach** or tool for the right job?

Operating Model

What **complementary changes** needs to be made in order to take full advantage of new capabilities, such as skills, better IT, training, process re-design or job redesign? Is my **operating model** fit for purpose?

Competition

How will this investment make us more **competitive?**

How will it help us **win** and **differentiate** ourselves against competition?

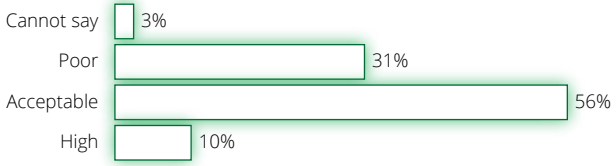
Innovation & Growth

How will the investment foster greater **innovation** and **growth** opportunities?

Deloitte IDO Playbook, 2022

It may also be asked whether organisation leaders are fully aware of the extent of the transition they need to make in order to become insight driven. The responses to our survey indicate that a key priority for many organisations is to put an effective operating model in place, as shown in figure 6. However, almost a third of respondents admitted they had a 'poor' operating model for providing effective analytical insights, and over half thought that their operating model was 'acceptable' – indicating a need for further improvements before it can be considered highly effective. This presents a challenge as without the right organisational structure in place, analytics will not achieve its full potential.

Figure 6. Effectiveness of operating models to provide analytical insights (Deloitte IDO Survey 2022)



Responsibilities for data, analytics and AI

In developing their analytics capabilities, organisations need to be flexible and agile in responding to opportunities and applications that emerge. At the same time there must be an organisation and management structure with clear responsibilities and accountability for driving analytics and insights activities. In this year's survey we asked respondents about the location of their resources for data functions and who provides the leadership for them. Responses were varied and highlight the need for stronger processes.

A large majority of respondents (77 per cent) indicated that analytics resources should ideally be located in-house, but arrangements within organisations can differ widely. In most organisations resources for analytics are either located in a central team or within business units, and resources for platform management and data management within the IT function. Across many organisations Data / Analytics are gaining importance, and as a result are emerging as stand-alone functions with expertise beyond software management, whilst IT remains more focused on platform management. A few (larger) organisations also distribute their technically skilled resources on a regional basis. Figure 7 identifies the location of data, analytics and AI resources as specified by our survey respondents.

Figure 7. Location of data, analytics and AI resources (Deloitte IDO Survey 2022)

	Business functions	Central or primary data and analytics team(s)	IT	Regional or dispersed data and analytics team
Analytics	33%	35%	17%	14%
Artificial Intelligence	19%	35%	36%	10%
Data and Analytics platform management	8%	27%	60%	5%
Data Management	20%	25%	48%	7%

Operating models

Centralised ↑ ↓ Decentralised

Centralised	Analysts reside in one central group where they serve a variety of functions and business units and work on diverse projects
Factory	A model which leverages offshore or outsourced capability to provide an engine room for analytics which is focused on industrialising solutions
Consulting	Analysts work together in a central group, but act as internal consultants and charge business units for their service
Centre of Excellence	A central entity coordinates the activities of analysts across units throughout the organisation and builds a community to share knowledge and best practices
Functional	Analysts are located in functions like marketing and supply chain, where the most analytical activity occurs
Dispersed	Analysts are scattered across the organisation in different functions and business units with little coordination

Deloitte IDO Playbook, 2022

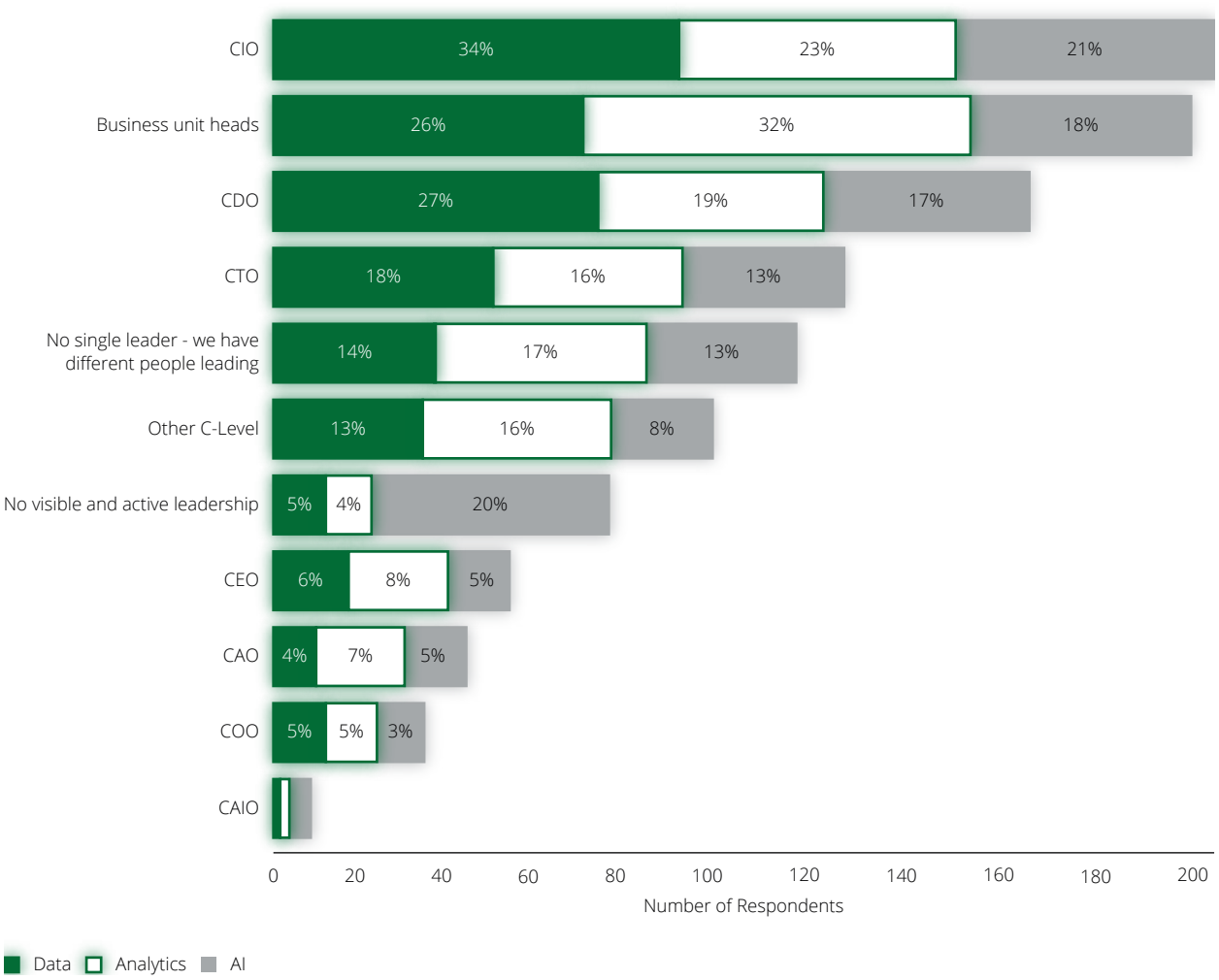
We also asked respondents which management roles have responsibility for data, analytics and AI within their organisation. Figure 8 shows the percentages of organisations where the responsibility for data, analytics and AI is given to particular management roles.

A number of findings stand out. Whilst figure 7 shows that 35 per cent of organisations locate their resources for analytics centrally, figure 8 highlights that the Chief Data Officer (CDO) has responsibility for analytics in only 19 percent of the organisations surveyed. Instead, in 32 per cent of cases the responsibility for analytics sits with the heads of business units. This is often attributed to the fact that analytics needs to be closer to specific business functions which produce and utilise the insight. Meanwhile, data is often managed centrally at a higher level and both capabilities are supported by the IT function. Thus, it is important for leaders across data, IT and analytics capabilities to work in a syndicated manner to become a truly insight driven organisation.

A possible concern is responsibility for AI, with a notable 20 per cent of respondents stating they did not have any visible or active leadership for AI. This lack of leadership will make it difficult for organisations to fill any gaps in AI skills they may have and need to fill.

As organisations become more insight driven overtime, they should be prepared and willing to flex their operating models accordingly to meet the demands presented by a growth in data, analytical and AI capabilities along their maturity curve.

Figure 8. Management roles responsibility for data, analytics and AI (Deloitte IDO Survey 2022)



(As part of this multi-select question, respondents had the option to select one, more than one, or no responses per role type. As a result, percentages are not expected to add up to 100%).

People

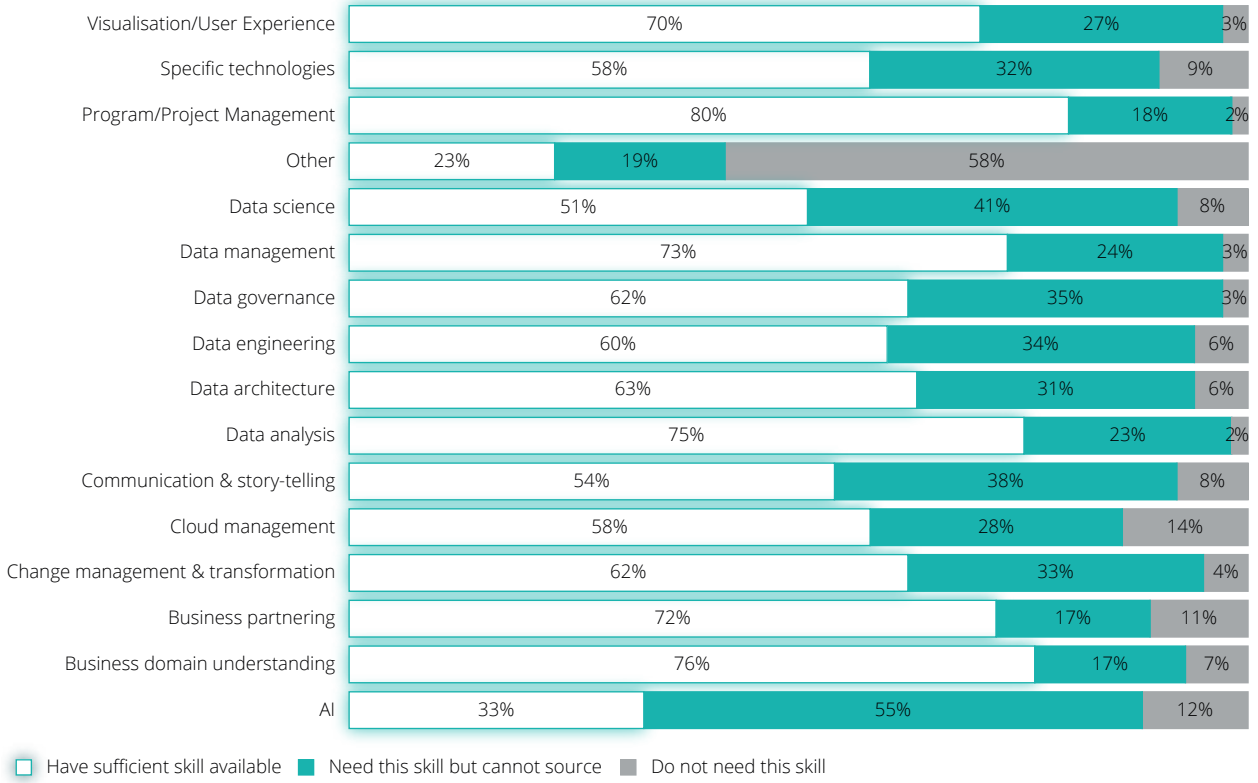
How big is the shortage of data skills?

A combination of people and automated capabilities is needed in an Insight Driven Organisation, but it is widely recognised that there is currently a shortage of people with the required data skills. Organisations may therefore struggle to acquire and retain specialist staff in a highly competitive employment market and should therefore look to more robust talent recruitment and retention strategies.

Our survey looked at the shortages of particular data skills our respondents were experiencing such as cloud management, data analysis and data governance. There were mixed responses, as shown in figure 9. A majority said that they currently had sufficient business (e.g. project management) and data (e.g. data analysis) skills available (although needs may change in the future); on the other hand many organisations said that they also lacked needed skills but could not source them. For example, 41 per cent of respondents have a shortage of data science skills that they cannot source (up from 39 per cent in our previous year's IDO survey). Respondents also reported gaps in skills that they could not fill in areas such as communication skills (38 per cent), data governance (35 per cent) and change management and transformation (33 per cent). Among government and public sector organisations, the need for skills in change management and transformation (57 per cent) and communication (52 per cent) were much higher than the average.

Artificial intelligence is still at a fairly early stage in its evolution and implementation across all sectors, but the demand for AI specialists seems certain to grow over time. About a third of our respondents told us that they had sufficient AI skills, but more than half (55 per cent) said that they needed more people with AI skills but could not source them, up from 43 per cent in last year's survey. There is a risk that the shortage of this skill may slow down the advance of AI in business and government.

Figure 9. Balance of skills needed to deliver effective insight (Deloitte IDO Survey 2022)



The skills shortages indicate a continuing need for a larger global workforce of data specialists. A question, however, is just where are the extra numbers going to come from? Organisations can rely to some extent on acquiring skills through recruitment or internal training and upskilling their workforce, but this does not address the problem of the global shortage in skills. It seems likely that a wider pool of talent may need to come from education and training initiatives across sectors or industries.

Organisations can try to close some of their skills gap by partnering with others to share talent or by using third party specialist suppliers. Typically, suppliers are innovating the models through which they provision data and analytics talent to the market as a result of shifting demands, for example, via deals to "outsource and run" data and analytics teams on a semi-permanent basis, which has become more common place.

In the current state of the global market for data specialists, where there are not enough skilled people to meet the demand from employers, we can therefore expect to see a battle for talent and, in all likelihood, upward pressure on remuneration levels.

CORE PEOPLE CAPABILITIES

Being able to blend business and technical skills is critical for the success of an AI capability. Very rarely, a blend of skills may be present in a very highly skilled individual; however, it is this blend of blue (business) and red (technical) skills within a capability which drives purple talent. Consider creating an Insight Driven Team for every AI project you embark on.

BUSINESS AND COMMUNICATION

- Agile, Hybrid, Project Management
- Budgeting and Funding
- Business Analysis
- Business Change
- Business Metric Definition
- Capacity Management and Scheduling
- Community Management
- Demand Prioritisation
- Functional Testing and UAT
- Incident Management
- Innovation Management
- Knowledge Management
- Market Analysis
- New Service Design
- Partnerships and SLA Management
- Process Design
- Stakeholder Management
- Storytelling
- Training
- User Experience Design
- Vendor Assessment

TECHNICAL AND ANALYTICAL SKILLS

- Advanced Visualisation
- Machine Learning Engineering
- Configuration and Release Management
- Customer Segmentation
- Data Mining
- Data Protection and Anonymization
- Data Quality Enhancement
- Enterprise Architecture
- ETL Development
- Cyber Security
- Data Architecture
- External Data Provisioning
- Infrastructure Management
- Load Testing
- Natural Language Processing
- Neural Networks
- Regression Modelling
- Security Advisory
- Server Administration
- Solution Architecture
- Unstructured Data Processing
- Web Analytics
- AI Deployment

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ADOPTING A HUMAN-CENTRIC HYBRID MODEL TO ATTRACT AND RETAIN TALENT

1. SOURCING & ATTRACTING TALENT

Organisations should recognise that success depends on more than technology talent. For example, data scientists often struggle when they aren't clear on the business problem they're supposed to solve. The result can be AI projects that goes nowhere, and disillusioned data scientists who deflect to competitors. Subject matter experts who can 'speak data' to data scientists while 'speaking business' to executives are invaluable.

2. UP-SKILL / CROSS-SKILL OF EXISTING TALENT

Elevate your employees' skills beyond adequate for the role which will allow wider utilisation of talent within the organisation. This can be done through interactive training material, professional and industry related certification, coaching, webinars and workshops and digital tool/ platform learning.

Upskill management to address employee wellbeing demand and reduce talent attrition.

Facilitate acquisition of new skills and competencies which can be implemented in multiple job functions and will allow team flexibility. This will increase overall productivity and talent utilisation.

3. RETAINING TALENT THROUGH BETTER CULTURE

Physical working spaces such as a cockpit of screens or Bring Your Own Device are ranked highly by Next Generation talent. Agile is becoming a norm post-pandemic break out. Employees in data and IT space are seeking better work-life balance, making a hybrid working culture one of the key drivers for talent acquisition and retention. Similarly, organisational culture and innovation, such as Google's famous encouragement of continuous innovation through empowering employees to improve processes they don't like, attract talent who enjoy thinking outside of the box.

Overall, getting the right motivational factors in play is fundamental to successful long-term retention; high degrees of autonomy, opportunities to develop as subject matter experts, and above all a clear purpose to the work at hand.

Deloitte IDO Playbook, 2022

Process

Challenges & Barriers

Most organisations recognise the need to change and transition to becoming insight-driven, but there are several strategic process barriers they may need to overcome. From our survey responses, we find that the biggest barrier is a difficulty in defining value from analytics and insights, and in prioritising investment between competing initiatives and demands for funding from different sponsors. This appears to be a particular problem for organisations in some sectors, with a particularly large proportion of respondents in the energy, resources and industry sectors (81 per cent) and in government and public services (67 per cent) identifying the struggle to define value and prioritise projects as a significant barrier to developing their analytics capabilities.

Value can be created in a number of different ways: by generating new revenue, improving operating efficiency, reducing costs, building capability, mitigating risk or achieving compliance with regulations. However, it can be difficult to attribute the creation of value specifically to analytics. Communicating value is compounded by the lack of a process for measuring the outputs obtained from analytic insights. Unless it is clear what analytics has contributed specifically to decision-making, the outputs cannot be measured with confidence. If outputs are not measured and valued, prioritising investment is difficult. Indeed, the main challenges for organisations are defining value, prioritising projects and measuring outputs (figure 10). In our previous (2021) survey, we found that nearly half of all organisations tend to "think about, and measure, analytics as part of the wider solutions and functions that they contribute to," rather than having "a consistent, systematic mechanism and performance metrics to measure analytics return on Investment (RoI)." This latter finding was implemented by only 8% of respondents last year. As organisations are under-utilising their ability to measure analytics for ROI, new approaches for assessing value from data analytics are needed.

Other key challenges noted in figure 10 are the need to develop capabilities in data governance and management, and undertaking the process of change management. As organisations look to scale their analytics and digital capabilities, these challenges become ever more important to address in order to set the foundations for wider availability of data and the implementation of advanced analytics.

Figure 10. Challenges to generating analytical insight (Deloitte IDO Survey 2022)

Building Insights	Building advanced analytics and AI capabilities	28%
	Data governance and management	39%
	Delivering your data	25%
Communicating Analysis and Tracking	Comminicating value	20%
	Continuous improvement	10%
	Delivering on business case	10%
	Tracking and measuring outputs	36%
Defining & Scoping	Defining value and prioritising projects	52%
	Scoping project	17%
Designing to meet Regulatory Requirements	Designing scaleble solutions	26%
	Experimenting with prototypes	11%
	Privacy Regulations	18%
Embedding Insights	Change management and transformation	37%
	Making use of the insights	14%
	Others	1%
Maintaining Solutions	Running and maintaining solutions	16%
Project Initiation	Identifying project sponsor	17%
	Securing project funding	19%
	Securing stakeholder buy-in	22%
	Sourcing and securing talent	20%
Scaling Analysis	Adopting and embedding analysis	20%
	Converting Proof of Concepts to solutions	27%
	Delivery method	14%

Challenging the status quo

When embarking on an IDO journey, it is important not to underestimate the potential for resistance and the levels of education and change which need to take place across the organisation.

Cultural Change
The bigger and more mature the organisation, the more difficult it is to drive a cultural change or transformation.

Inefficient Delivery
Not having a strong operating model where centralised and decentralised resources work seamlessly together.

Inaccurate Metrics and Models
Over simplistic models, overconfident analysts, ill-defined outcomes/assumptions lead to incorrect results.

Technical Perception
Image is 'Techy', complex, and related to math and statistics, and hence difficult to comprehend or thought to be IT-only.

Talent Crunch
There is a large supply gap of data analyst and data scientist talent, organisations are shifting towards hiring talent who generate insights - not just number crunchers.

Data
Confidence in data is low due to inconsistent definitions. Reluctance to share data and inability to get timely access to it.

Customisation leading to unnecessary complexity
Re-inventing the wheel rather than exploring the market for off-the-shelf elements can increase complexity as well as time to market.

Siloed Implementation
Analytics is developed in silos and effort is duplicated. It lacks implementation vision and strategy for enterprise-wide integration.

Buy in
Is often stuck in ROI discussions, change inertia, scepticism, fear of being challenged, and under cost considerations.

Tackling the Jargon
Organisations are distracted by the hype and are confused by what Big Data, AI and Robotics really means to them and how best to apply them.

The right process and governance framework

Organisations can benefit most from small and wide data by leveraging the right process and governance framework

- Sometimes, **breaking down both problems and solutions into bite size chunks** lets you derive more valuable, specific and distinct insights from your data at pace – rather than clouding thoughts and creativity by relying entirely on the processing of big data and complex data hungry deep learning models
- Collecting large volumes of data can be a challenge for organisations – **what if** you could start narrow and scale upon proven success?
- It is important to note from the below framework – small and wide data does not fall in the face of robust data governance!

Step 1
Start with the problem
- Start with defining the problem and the business ideas

Step 2
Ask the Crunchy Questions
- The crunchy questions break the problem into small chunks
- Questions should be specific, narrow and answerable quantifiably

Step 3
Analytic Use Cases
- Build the analytical use cases that can then be executed as proof of concepts
- This can be the build of an AI model to answer a crunchy question

Step 4
Test with small and wide data
- Build proof of concepts at pace and low cost using small and wide datasets
- Start small and wide, learn fast (fail fast!)
- Park the questions which cannot be answered or are incorrect hypotheses

Step 5
Prioritise and iterate with agile
- Prioritise POCs and use cases according to business value and complexity
- Iterate on a minimum viable product with agile methods, building on capability until value is proven and met

Step 6
Deploy and scale in production
- Upon proving value, organisations can choose to invest the time and money into deploying production grade architecture, building necessary pipelines and completing full data set integrations

Deloitte IDO Playbook, 2022

Data

Data Challenges

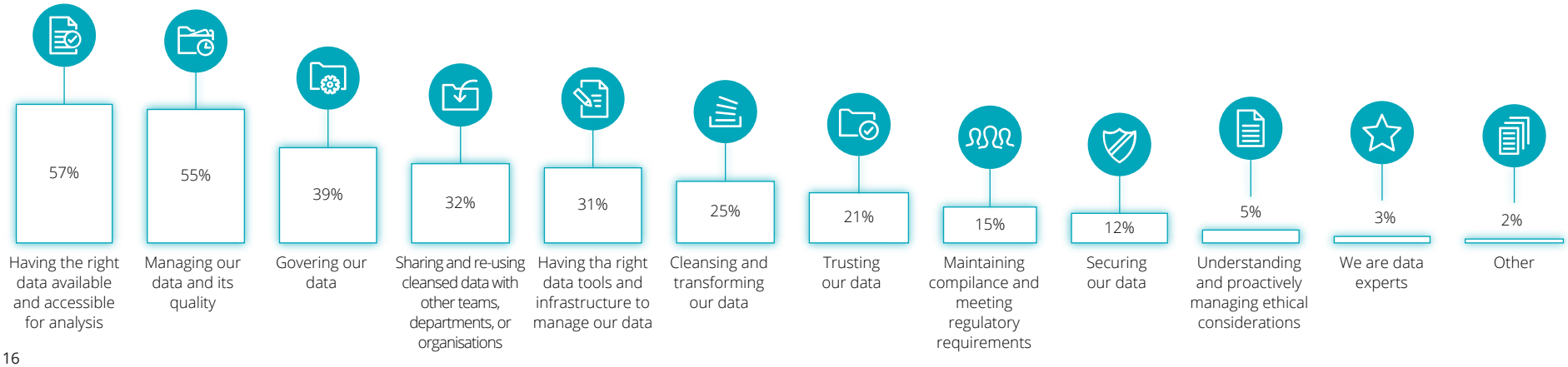
Data, Analytics and AI require comprehensive and reliable data from which to develop insights and make predictions or prescribe courses of action for decision-making. In order to identify the areas where further progress is most needed, we asked our respondents to identify the main challenges they face in collecting, organising, managing and using data for analytics. Figure 11 identifies the most significant challenges faced by organisations.

Almost 60 per cent of the responses identified the problem of finding the right data and accessing it for analysis. This was most prevalent among companies in the energy and resources, financial services and consumer sectors. For advanced analytics, data must be gathered from a wide variety of internal and external sources. For AI in particular, there is a need to gather and analyse both structured data (data in standardised formats) and unstructured data (data in non-standard format, often text-heavy or in non-text formats such as audio and video files). Accessing data and making it available for advanced analytics can also be a problem for organisations with outdated IT systems, and for companies that have grown by acquisition and have retained multiple non-integrated systems.

An ability to gather and analyse data will be crucial for maintaining effectiveness and competitiveness. Organisations should therefore focus on how they access and make use of structured and unstructured data to drive business value, which often requires investment in specialist data management technologies and a more modern solution architecture.

Many respondents (particularly companies in energy and resources, financial services and the consumer sector) also struggle with managing data and data quality. These challenges do not seem as widespread among government and public service entities, possibly because the data sources they are able to access are more reliable, but about one-quarter identified data security as an issue. This is considerably more than among companies in the private sector.

Figure 11. Key challenges faced by organisations (by number of respondents) (Deloitte IDO Survey 2022)



Problems with accessing the right data alongside poor data quality will prevent organisations from developing the capability to produce valuable insights to support decision-making, therefore encouraging further improvements to be made in these areas. However, the outlook is positive. In our previous year's (2021) survey, we found that about one in five respondents believed that the quality and completeness of their data was 'high' or 'very high'. This is a considerable improvement on previous years. In the 2022 survey, over two in five respondents did not identify accessing data or data quality as a challenge – indicating perhaps that further improvements have been made in this area within a short period of time.

The Data Mesh

A data mesh is a strategic approach to data management. Shift your organisation beyond centralised data methods to a decentralised one by empowering data producers and consumers to manage & access data without a central team

DOMAIN ORIENTED OWNERSHIP & ARCHITECHTURE

- A domain is a group of people organised around a common business function
- Here, we propose that the domain is responsible for the management of data created by the business function itself
- They are responsible for the composition, transformation and provision of data to end users, eventually exposing the data as data products
- The entire data lifecycle is owned by a domain

DATA AS A PRODUCT

- This is where the value is drawn from the data for the users and data products are created and owned by the various domains across your organisation
- They are self contained and each domain is responsible for the security and management of their products' ensuring data is relevant, secure and up to date
- They have a clear line of ownership and can be consumed by other data products or end users to support business intelligence and AI

SELF SERVICE DATA INFRASTRUCTURE AS A PLATFORM

- The technical pillar of the Data Mesh – Provides the data platform for the data domains and hosts the developed data products
- Helps promote domain autonomy where IT teams become facilitators for the organisation's domains to manage the data products
- Consolidates data services and products whilst reducing technology duplication – ensures domains are working off a single, collaborative platform removing siloes

FEDERATED COMPUTATIONAL GOVERNANCE

- Data governance standards are defined centrally, but data governance is applied at the domain level in a decentralised approach
- Domains have autonomy over data governance specific to their own products while adhering to a set of global rules that ensure a joined-up approach
- Autonomous data domain teams and centralised data governance functions collaborate in order to best meet the data needs of the organisation

Deloitte IDO Playbook, 2022

Technology

Technology & Technology Suppliers

An indication of the state of analytics within organisations may be obtained by looking at the software suppliers they use. To the extent that organisations use a limited range of widely adopted basic software for data processing, it may be assumed that they are still some way from becoming insight driven. However, for organisations that have a wider portfolio of technology suppliers, using their software to develop their capabilities such as cloud management and data management, might seem to be making good progress.

To become insight-driven, organisations will rely on the software and technology they use. They should monitor what they are currently using in different parts of their operations and assess whether new applications are improving their data maturity and capabilities.

In our survey last year, we found that the choice of technology vendors by respondents focused largely on business intelligence and cloud platforms, such as Microsoft Power BI, Amazon Web Services (AWS) and Tableau. This year, we find that although these are still used extensively, at least one in five respondents now also use other suppliers, such as Qlik (business analytics platforms), Microsoft SSIS (server integration systems), SAP Master Data Governance, and Informatica (enterprise data management). Figure 12 shows a word cloud highlighting the most frequently identified vendors organisations are working with.

Seeing a wider variety and use of more advanced analytic software is an encouraging sign that organisations are improving their analytics capabilities and technology providers are developing new software to meet the growing demand. Cloud service providers, such as Google Cloud, are responding to intense competition in their sector by making new data analytics products available on their platforms.

Figure 12. A comparative view of the most used vendors in 2021 vs 2022 (Deloitte IDO Survey 2022)

FY20/21

Top vendors used (% of total respondents):

Microsoft PowerBI	(50%)
Microsoft Azure	(45%)
Tableau	(29%)
Amazon Web Services	(24%)
SAS / Qlik	(16%)

Other vendors used:

- Blue Prism
- Databricks
- Exasol
- Splunk
- PegaSystems
- Informatica
- UiPath
- Cloudera
- Collibra
- NICE
- MapR
- WorkFusion
- Attunity
- Snowflake
- Dataiku
- Google Cloud Platform
- Looker
- Automation Anywhere
- RapidMiner

FY21/22

Top vendors used (% of total respondents):

Microsoft PowerBI	(60%)
Microsoft Azure	(54%)
SAS	(38%)
Tableau	(34%)
Amazon Web Services	(34%)

Other vendors used:

- Qlik
- Informatica
- Google Cloud Platform
- Databricks
- Microsoft SSIS
- SAP Master Data Governance
- UiPath
- Google Cloud AutoML
- Talend
- Blue Prism
- ThoughtSpot
- IBM Watson
- DataRobot
- NICE
- Automation Anywhere
- Snowflake
- WorkFusion
- Collibra
- Pegasystems

Future Focus: AI Adoption Barriers

Still some way to go for organisations...

AI will be a core element in insight driven organisations, but we are not yet seeing a rush to widespread adoption by organisations.

We asked our respondents whether they used AI within any of their business functions. 41 per cent said yes, but 59 percent said no (figure 13). Various reasons were given for not adopting AI. Some respondents said they wanted to use it but lacked the necessary data skills, and others were not yet thinking about using AI. Some respondents did not see it as a high priority and a few respondents said they lacked senior management sponsorship or sufficient funding. A small number (5 per cent) said that they did not understand the 'hype' and had not bought into the idea of value from AI (figure 14).

Among those respondents saying that AI was not a high priority for them, their main areas for investment in the next 12 months are measures to improve their data and analytics capabilities: upgrading infrastructure and systems; supporting digital or business transformation; improving data quality; improving business intelligence and reporting; and improving data governance, privacy and security. AI was much lower down the list of investment intentions. According to the Deloitte Data Management and Analytics report, Consumer, Financial Services and Life Sciences & Health Care industries are predominantly 'starters' in AI utilisation, with low deployment of AI technologies and low achievement of AI outcomes. Referring to the report, 'starters' have misleading self-perception of being Fast Followers and less likely to consider AI in their strategic planning and investments into AI enterprise integration.

There were respondents who mentioned that they would like to use AI, but felt they lacked the skills and recognised the difficulties they would have in building an advanced analytics capability. They also identified other barriers to progress, such as difficulties with defining value from analytics and prioritising projects, tracking and measuring outputs from the application of advanced analytics, data management, and change management (business transformation). In addition, where there is a lack of visible and active leadership from senior management, it would be difficult for organisations to attract and recruit (or develop) the skills they need.

Consequently, due to a lack of skills, finance and sponsorship, it will be difficult for organisations to get started with AI adoption.

Figure 13. Use of AI in business functions (Deloitte IDO Survey 2022)

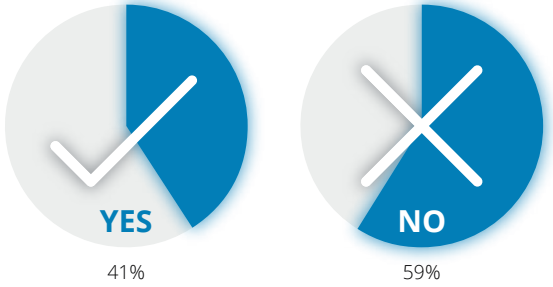
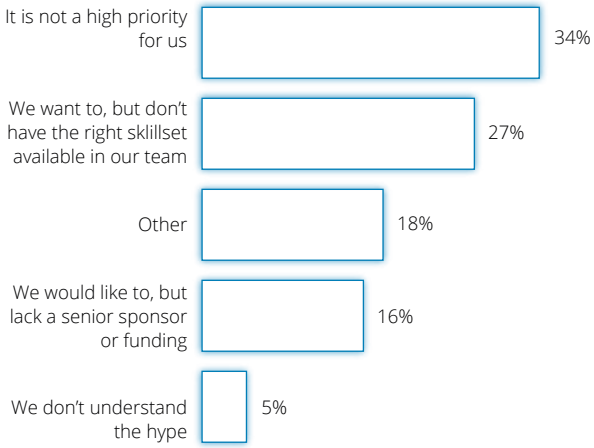


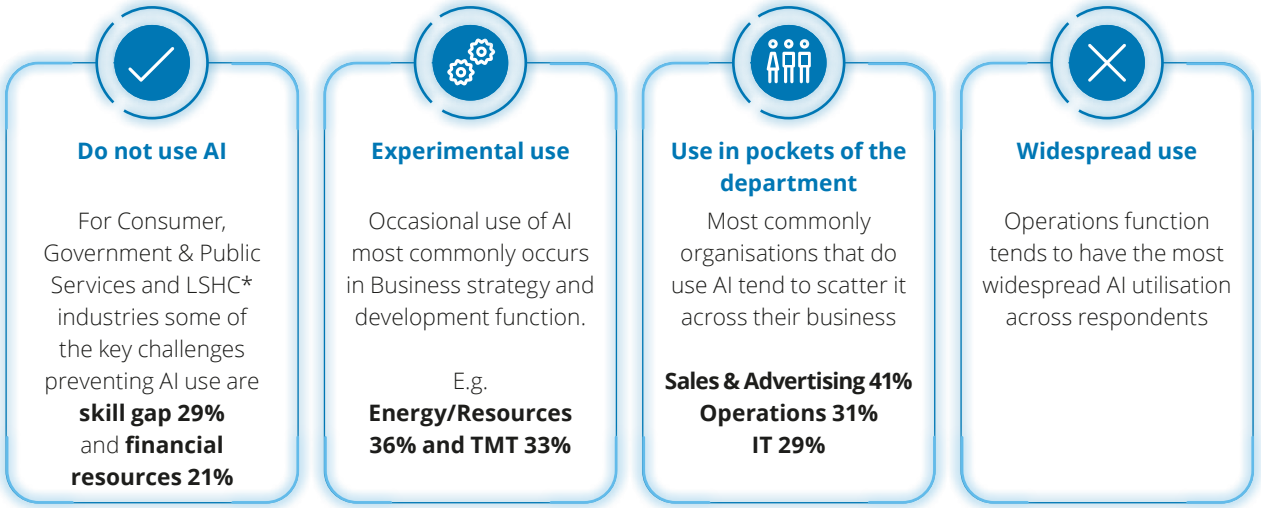
Figure 14. Reason for 'No' use of AI in business (Deloitte IDO Survey 2022)



There are variations in how different business functions have adopted and use AI (figure 15). In general, among the respondents who have adopted AI in some of their business functions; its use is not widespread. Instead, many of them are using AI experimentally as a process of learning and familiarising, and others have adopted AI in pockets of business functions such a sales and advertising, business operations and IT.

An understanding of AI and its potential for improving analytics is a critical requirement for its adoption; and it might therefore be expected that organisations using AI experimentally or in pockets within the business will extend applications in the future as their knowledge and understanding grows. However, only one in five of overall respondents indicated that building AI and machine learning solutions would be a priority for investment in the next year.

Figure 15. Adoption levels across business functions (Deloitte IDO Survey 2022)



*LSHC - Life Sciences & Health Care

Actions leaders should sonsider in order to help improve outcomes of their AI efforts:

1

Action 1
Invest in culture and leadership

The workforce is increasingly optimistic, and leaders could do more to harness that optimism for culture change, establishing new ways of working, and to drive greater business results with AI.

2

Action 2
Transform operations

An organization's ability to build and deploy AI ethically and at scale largely depends on how well it has redesigned operations to accommodate the unique demands of new technologies.

3

Action 3
Orchestrate tech and talent

Technology and talent acquisition should no longer be considered separate. Organizations should strategize their appproaches to AI based on the sklill sets thay have available, whether they derive from humans or pre-packaged solutions.

4

Action 4
Select use cases that can help accelerate value

Selecting the right use case to fuel your organization's AI journey depends largely on the value drivers for your business, influenced by your sector and industry context.

Deloitte's State of AI in the Enterprise, 5th Edition, Oct 2022 5th Edition report

Summary

The digitalisation of business and government is continuing at a rapid pace and organisations need to become more mature within their data and analytics capabilities over time to remain effective and in the commercial world, competitive.

It seems that the investment intentions of many organisations over the next 12 months will focus on areas for improving their analytics capabilities, but (in most cases) without yet adopting artificial intelligence extensively. It is also evident that progress may be held back by the lack of necessary skills. Clearly there is a long way to go, but progress is relentless and profound change is already under way. For organisations to become truly insight driven and make more informed decisions with better outcomes, they need to focus investments within data, analytics and AI capabilities consistently and efficiently over a long-term strategy.

Over time we can expect the most successful organisations will be those that adopt advanced analytics, including artificial intelligence, to enhance their insights for decision-making. To find out more information and to explore what it means to be an Insight Driven Organisation today, have a read of our new and improved website, which includes our revamped IDO Playbook 2022, available to view and download here.

Actionable Advice

What comes next? Becoming an Insight Driven Organisation is about evolution, not revolution. You can:

Join us for an IDO Scaling Lab: this is an interactive experience for organisation across all industries, and provides the capabilities and tools required to successfully break through analytical barriers and achieve insight at scale.

Experience Analytics: this is Deloitte's flagship technology event and one of our largest client events. It is a highly interactive event that provides our most valued clients with an immersive and innovative experience into data, analytics and AI and the essential tools they need in order to become an Insight Driven Organisation.

Start a conversation: Deloitte helps clients derive value from data to make better decisions. From strategy through to delivery, our capabilities cover all aspects of data management, information presentation, master data management, advanced analytics and data science.

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