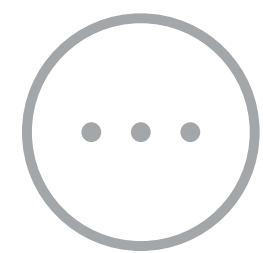




Developing a data insights strategy

How to extract value from your data



Introduction

Deriving value from data

More than ever, organizations need a better way to get value from their data. Multiple data sources have created an influx of information that needs strategic oversight—and with over 163 zettabytes of data expected to exist globally by 2025¹, this challenge will only get more complex.

Siloed organizational structures make it difficult for businesses to make sense of the trove of data at their disposal. The evolving regulatory landscape—as exemplified by the General Data Protection Regulation (GDPR)—is giving consumers greater control over their personal data, requiring organizations to clarify their stances toward data privacy, the management of personal information, and the ethical use of data. And all of this comes at a time when the Fourth Industrial Revolution is creating an ever-expanding ecosystem of stakeholders with access to corporate data, making it difficult to understand how to protect data wherever it resides.

Fortunately, with the advances made in artificial intelligence (AI), organizations now have the ability to overcome these obstacles. AI provides them with innovative processes, tools, and systems they can use to derive targeted business insights and financial value from their data, which is impelling a growing number of organizations to explore AI's feasibility.

However, despite its promise, many business leaders are still uncertain about how to derive tangible value from their data. Increasingly, it's becoming clear that success hinges on a company's ability to change how it interacts with the data it collects—ultimately moving from siloed structures to a cooperative model that defines common objectives for organizational stakeholders to ensure data is used responsibly and ethically. This starts with developing a sound data insights strategy, which will help organizations understand and define their data objectives and use AI to achieve them.

Data as a differentiator

When implemented correctly—with an agile architecture, strong governance, and customer-centric considerations—a data insights strategy can help you define and address your current organizational data needs, while making it easier to adapt to ever-changing regulations, customer sentiments, technologies, and business trends.

In fact, as data acquisition, delivery, and analysis capabilities evolve, a clearly defined, enterprise-wide data insights strategy will offer a distinct competitive advantage. That's because it's designed to replace the traditional, siloed approach to data collection and analysis with a more holistic one that allows you to derive progressively more meaningful insights from your data regardless of the maturity of your current approach.

To realize these benefits, however, you must first define your organizational goals, understand the pertinent challenges, and build a strategy that is both aspirational and capable of being executed. This means mastering the art of the possible and the art of the practical.

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¹ Andrew Cave, "What Will We Do When The World's Data Hits 163 Zettabytes In 2025?", *Forbes*, April 13, 2017, <https://www.forbes.com/sites/andrewcave/2017/04/13/what-will-we-do-when-the-worlds-data-hits-163-zettabytes-in-2025/#7556e040349a>, accessed April 10, 2019.



First things first: Setting goals

In recent years, organizations have opted to collect vast amounts of data assuming that, if they harvest enough of it, it will eventually give rise to relevant business insights. As the landscape evolves, however, it's becoming evident that more data isn't necessarily better. After all, the more data an organization has to wade through, the more difficult it is to separate the valuable business information from the irrelevant.

A data insights strategy is built on the premise that, to realize the true potential of data, you first need to determine why you're using it and what business value you hope to glean from it. This use case-based strategy lets you gain buy-in from key stakeholders more easily, and ultimately see faster returns. The idea is that, by moving away from siloed data-management approaches toward a more collaborative model, stakeholders across the organization become more accountable for how data is used, thereby reducing the risks associated with potential data misuse.

This begins by establishing your data goals so you can pinpoint which insights are most valuable. The purpose of this exercise is to align data management processes with your overall business strategy. Some goals are unique to an organization's industry, level of data maturity, and business objectives, but many are universal. For instance, most organizations want to use their data to:

Compete in a global digital marketplace

Data can be used to stay competitive with peers, startups, and industry giants, and to better anticipate the unexpected, like black swan events or disruptive market trends.

Attract investment

Companies that have the data to demonstrate profitability and use that data to strengthen their organization from within—either to spur innovation or capitalize on the changing technology ecosystem—are more likely to gain the attention of investors.

Earn customers' loyalty

Not only can data help produce goods and services that better meet customers' needs, but it can also help enhance your marketing efforts, social media presence, and loyalty programs to forge a stronger connection with those customers—a connection that could elicit loyalty and goodwill in the event of a data breach.

Improve business capabilities

By improving data accessibility, quality, classification, and security, it gets easier to make predictive and insight-driven decisions, identify risks, and seize new business opportunities.

AI enhances data consumption and provides opportunities for organizations to stay at the forefront of innovation.

As part of a successful data insights strategy, AI automates data processes that sift through massive amounts of data (big data) and locate gold nuggets of information that may not be visible to the human eye. This enables employees to be redeployed to focus on more strategic objectives and to use the insights revealed by AI to make better decisions.



The challenges ahead

Making the shift from a tactical data approach to one that is more cohesive, all-encompassing, and supportive of organizational goals doesn't happen without some planning. Existing structures and frameworks, combined with a swiftly evolving data landscape, will present bumps in the road. To navigate them, it's essential to understand where—and how big—they are.

While each company's challenges are unique, these barriers typically surface in a number of key areas:

Data flows

If your organization hopes to use its data to provide enterprise-wide insights, the data must be in a single, consistent format. After all, if supply chain records and consumer transactions are in two separate systems and only the supply chain records are collected, cleaned, and normalized into a format that machine-learning programs can understand, then the system can only provide insights on a portion of that data.

A siloed approach may have worked in the past, perhaps to improve information security or mitigate fraud. But as external and internal data sources grow, and cross-functional and third-party data consumers increase, this approach could be complex, time-consuming, and costly. To derive value from data, all your data must be of a high-enough quality, and normalized appropriately, to be read by machine-learning or AI algorithms.

Existing data

Over the years, different internal departments likely collected and categorized data in different ways. To make the data accessible to the business at large, you may have to embark on a largely manual discovery process that involves interacting with groups from across the enterprise to understand the array of available data and how it's being used.

To complicate this challenge, you also have to take time to understand the scope of your data (e.g., records versus non-records;

enterprise data versus functional data versus third-party data) and determine how to deal with structured, unstructured, and paper-based information.

Data architecture

Traditional data architecture is often complex, characterized by an inflexible technology stack with data stored across a wide range of dispersed technologies. This makes it hard for organizations to quickly respond to changing market conditions. To accelerate speed to market and reduce costs, your data architecture must be scalable and agile.

A streamlined architecture allows you to add more applications or new technological enhancements as needed, and makes it easier to cohesively manage data stored in local repositories, the cloud, data warehouses, data lakes, and on digital devices. It also enhances organizational ability to access analytical tools or unstructured data within those repositories.

The best part? It's not necessary to implement an entirely new data architecture at once. A gradual, deliberate update—one that starts with top operational and risk priorities and works down—can be just as effective at enhancing data accessibility and generating real-time insights.



Processes and ownership

In a traditional data framework, data originates from countless sources in countless ways. Without a central driving function, no one is accountable for the overall management of the organization's data or its quality.

To maximize the value of your data, it's critical to establish clear accountability concerning its generation and use. This shift may require new systems, processes, and organizational structures.

Privacy and security

Between the European Union's General Data Protection Regulation (GDPR), Canada's Personal Information Protection and Electronic Documents Act (PIPEDA), and the California Consumer Privacy Act (CCPA), as well as a host of other emerging data privacy laws, there's a global movement to heighten data privacy compliance requirements and push organizations to demonstrate more accountability and safeguards for this information. While companies have typically been reactive to such regulatory shifts, those that voluntarily get ahead of them will likely be leaders in their marketplaces.

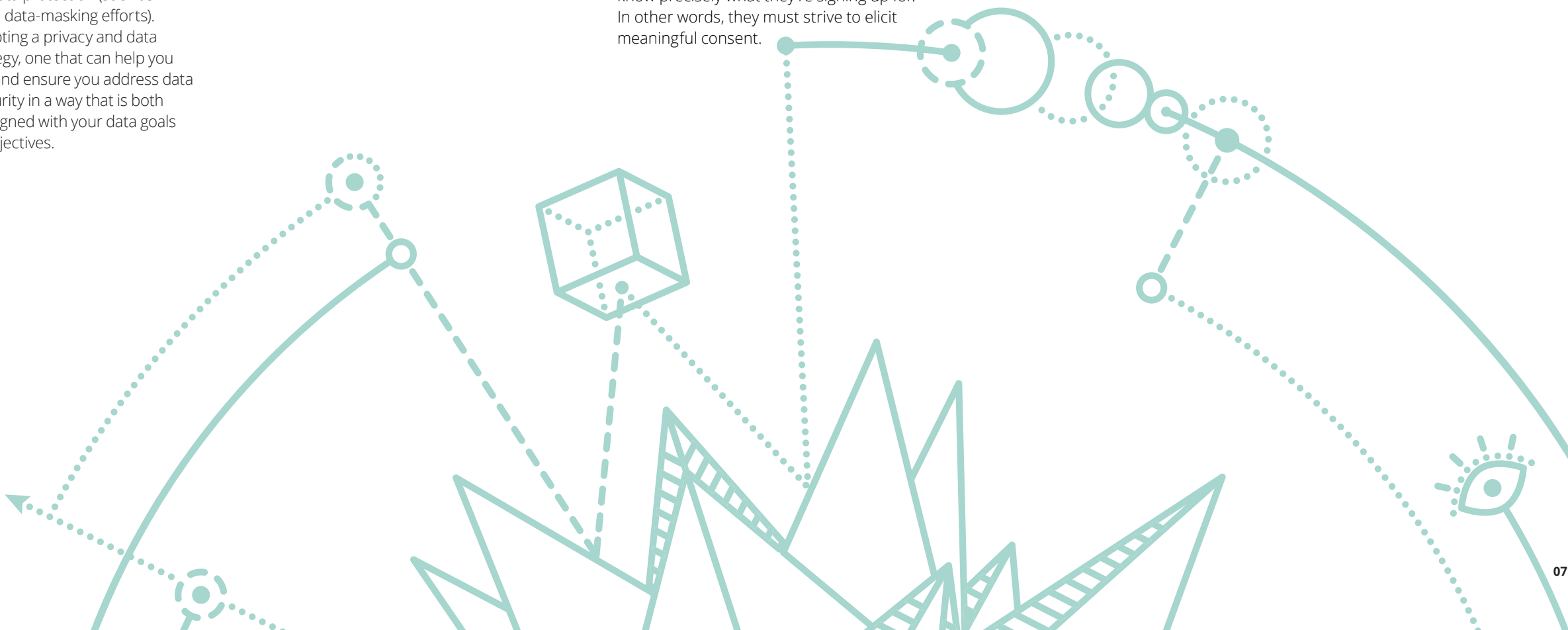
Those that want to get ahead should also consider how to address such things as data collection, data sharing, repository access, customer consent, customers' right to be forgotten, and data protection (such as tokenization and data-masking efforts). This entails adopting a privacy and data protection strategy, one that can help you stay on-course and ensure you address data privacy and security in a way that is both proactive and aligned with your data goals and business objectives.

Transparency and ethics

As AI algorithms and other forms of data collection evolve, the pressure to be transparent is mounting. The United States' recently proposed Algorithmic Accountability Act of 2019 is one result of this². To earn the trust of customers and regulators—and meet board requests to protect customer privacy—companies are expected to create policies that are not only transparent and clearly articulated, but that enforce ethical standards for the collection, use, and analysis of personal data.

These new policies must go beyond traditional efforts—like lengthy terms of service and privacy notices, which often go unread—and use new mechanisms, such as active and quick responses or point-in-time consent requests, that allow customers to know precisely what they're signing up for. In other words, they must strive to elicit meaningful consent.

This requires you to rethink how you communicate such information. In many cases, new frameworks and controls need to be established to prioritize ethical decision-making—perhaps by using independent ethical third-party review boards or conducting algorithmic bias assessments. You also have to carefully consider how to embed people into an AI solution, and be able to justify when opportunities for unsupervised learning are appropriate.

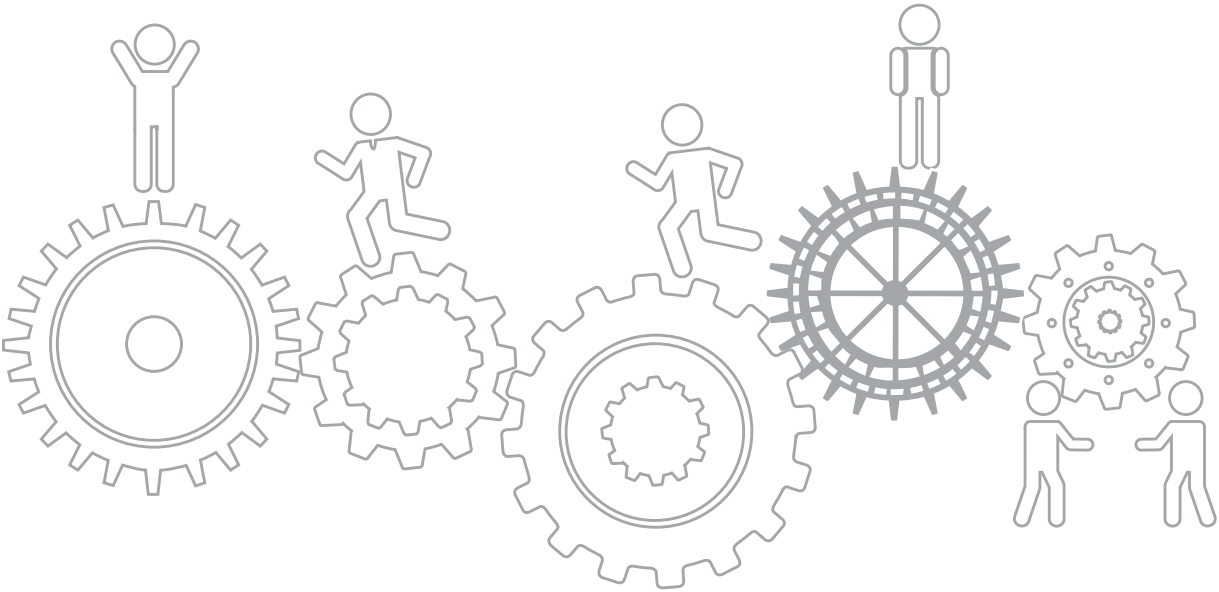


Organizational culture

Deriving value from data doesn't happen instantly. For it to work, you need complete buy-in at the management level as well as the lines of business. This means everyone, from IT to business functions, must reimagine how they collect, share, normalize, and use data.

It means risk teams—including those responsible for data security, privacy, and internal audit—must challenge the business to think critically about what it's trying to accomplish with its data.

It also means different enterprise stakeholders, such as the chief risk officer, chief financial officer, chief information officer, chief data officer, chief privacy officer, and chief information security officer, as well as the legal and compliance groups, must work together to:



- 1. Embrace new data architectures, processes, and ownership structures
- 2. Embed effective internal controls into organizational processes and technologies to better safeguard key data assets
- 3. Understand and, ultimately, operationalize the dire importance of data privacy and security
- 4. Learn to value transparency and ethics
- 5. Be attuned to both the risks and advantages of using emerging technologies like AI

This type of buy-in delivers more than an opportunity for organizations to capitalize on data as an asset. It also ensures customers' interests are well-protected.

Boards also have to diligently push to ensure transparency, privacy, and security obligations are being met, and management has to learn to adapt its decision-making practices to incorporate new uses of data.

All these changes will require a massive cultural shift and a willingness to rethink the ways things have always been done. It necessitates a clear change management strategy and a proactive approach to disruption.

Identifying the particular barriers your organization faces is an important input for your planning.

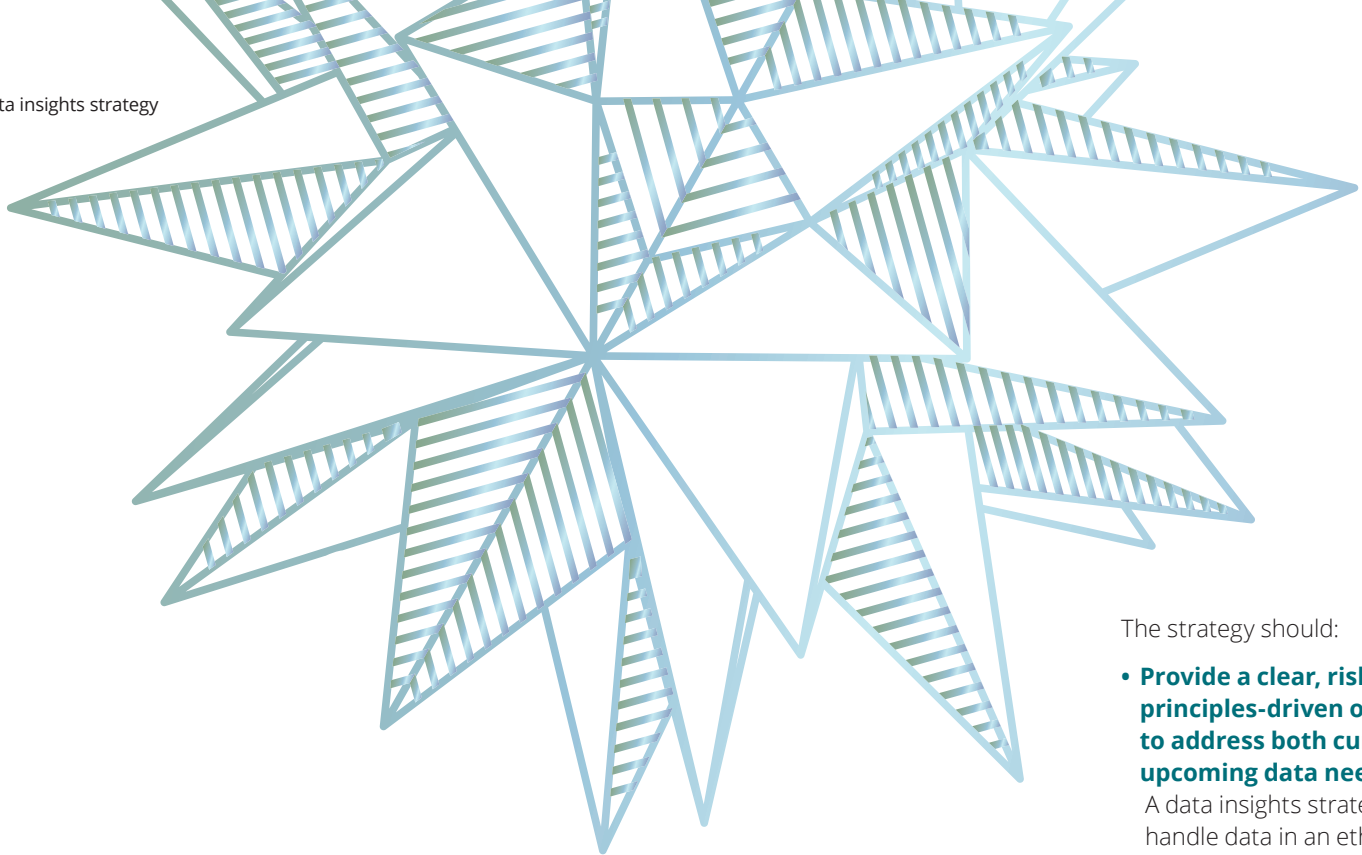
² Cyrus Farivar, "New bill aims to stamp out bias in algorithms used by companies", *NBC News*, April 10, 2019, <https://www.nbcnews.com/tech/tech-news/new-bill-aims-stamp-out-bias-algorithms-used-companies-n993186>



Building a sound data insights strategy

With a firm understanding of the challenges on the road ahead, it's time to design a data insights strategy that both acts as a guide toward your data goals and pre-emptively addresses potential barriers. Such a strategy should be far-reaching, and outline your vision and objectives for uncovering the value of your data while aligning them with your overall business strategy.

The path forward will be long, complex, and anything but predictable. A data insights strategy must therefore be detailed enough to keep an organization on course and flexible enough to allow it to adapt swiftly to any unexpected obstacles that arise.



The strategy should:

- **Provide a clear, risk-based, principles-driven outline of how to address both current and upcoming data needs**

A data insights strategy can help you handle data in an ethical, transparent, and trustworthy manner at all times by mandating processes and procedures that clarify how data can—and can't—be used. This minimizes risk and protects customer interests.

- **Align with your business strategy, vision, and goals**

Every data need, and respective solution, should ultimately help you achieve your organizational goals and provide value.

- **Enable joint data governance**

Every stakeholder must be accountable for how data is used, analyzed, and managed. A joint governance strategy ensures that accountability extends beyond siloed business groups to encompass the organization at large.

- **Mitigate data risk**

Risk has the capacity to drive performance, but only if it's approached strategically. To realize the full value of a data insights strategy, take steps to classify your data to determine its relative importance, protect your most critical data assets (i.e., your crown jewels), and embed effective data protection controls throughout.

- **Foster an enterprise-wide commitment to designed data outcomes**

To eradicate siloed thinking and attain holistic data objectives, you need both cross-organizational collaboration and a central team to guide the mission. This team will be responsible for executing the data insights strategy, defining other teams' roles and responsibilities, and acting as a resource to address data-related questions, issues, and opportunities.

- **Position the organization for the future**

This means disruption and innovation should be built into the design of the data insights strategy. For instance, where applicable, you may incorporate use cases for the implementation of new and groundbreaking technology solutions, such as AI, cloud, data lakes, blockchain, and others.

- **Include a governance model, PMO structure, and independent risk oversight function to facilitate strategy execution**

This model should consider how to encourage and support collaboration with key stakeholders from other functional areas, work with third parties, and make decisions about new roles to facilitate the execution of the strategy. Some organizations have begun appointing ethics officers to assist with governance and oversight, and to participate in both C-suite level and board discussions.

- **Establish an AI operating model**

This model should help drive a consistent approach to AI adoption by setting targets, establishing processes, and ensuring alignment with core objectives in the data strategy.

- **Outline how data will be accessed from, and shared with, third parties.**

Establishing a third-party data ecosystem is an excellent way to add value for the customer and gain additional insights for the business; one only has to look at open banking and the "Hub" model in policing for examples of this. To work in today's business environment, however, the data ecosystem must both preserve individual privacy and ensure data security—challenges that should be addressed early on, as part of the data insights strategy.



The road ahead

There’s no question that the evolution of data is dramatically redefining business. Now that the abilities to analyze and process data are catching up to our ability to collect it, there’s no telling what the future might hold. To capture new opportunities as they arise, it’s essential to consciously re-envision how data is viewed and used in alignment with organizational goals and objectives. And that requires a data insights strategy.

Every organization’s data insights journey will be unique, and every data insights strategy may look very different. If you already have a strategy in place, it may be an opportune time to take action on specific components and revisit those that might need to be nudged back on track. If you’re just starting to develop one, you should ensure your company is properly positioned to execute it.

Whatever stage of the data insights strategy journey you’re in, follow the roadmap you designed to guide your execution process and measure your progress to ensure you’re deriving the most value possible from your data.

Contacts

Beth Dewitt

Partner, Data Protection and Privacy Leader
Risk Advisory
416-643-8223
bdewitt@deloitte.ca

Nira Sivakumar

Partner, AI Strategy Leader
Omnia AI
416-867-8141
nsivakumar@deloitte.ca

Bilal Khan

Managing Partner
Deloitte Data
416-354-1295
bikhan@deloitte.ca

Stephanie Davis

Manager, Data Protection and Privacy
Risk Advisory
416-874-4403
stephadavis@deloitte.ca

Preeti Shivpuri

Senior Manager, AI Strategy
Omnia AI
416-874-3385
pshivpuri@deloitte.ca

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