WHITEPAPER

Becoming a data- and AI-driven organization with a Data Value Office

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Content

Why many organizations struggle to organize for data & AI

In the rapidly evolving AI environment, we need to focus on building a strong data foundation required for data and AI products. This data foundation is essential for ensuring AI-enhanced operational efficiency, integrity, value creation, and innovation, as AI relies on a high-quality data for training. Despite its critical importance, many organizations continue to struggle with persistent data foundation challenges that significantly limit their ability to fully leverage their data assets. These challenges not only disrupt operational efficiency but also pose significant risks to the adoption of AI technologies. These issues arise from a number of repetitive patterns, which are described below. The lack of a strong data foundation hinders an organization's ability to make better, well-informed, or even automated decisions. When leaders cannot trust their data, strategic decisions are either delayed or made based on inaccurate or incomplete information, potentially resulting in costly mistakes and missed opportunities. Moreover, there is often

no dedicated unit tasked with identifying, addressing, and resolving overall data management challenges, leading to fragmented and inconsistent approaches on an individual or departmental level.

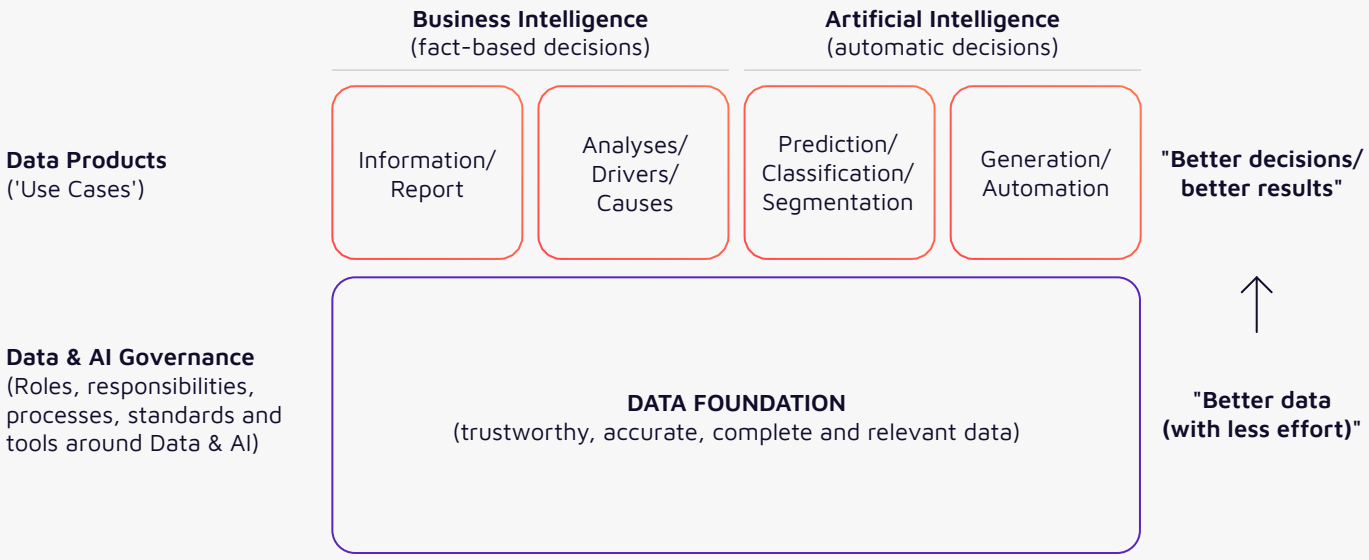
Unclear roles and siloed responsibilities

First, in many organizations, data governance is often hindered by a lack of clearly defined data management roles and responsibilities. This absence of transparency and a well-defined responsibility framework leads to a data management environment with diffuse accountability, unclear ownership, and limited strategic oversight. When it comes to data access and system permissions, organizations often face two problems: On the one hand, individuals who need data for daily operations may not have the access they need; on the other hand, system permissions and authorizations for data handling may be overly distributed, making them difficult to manage and control. This leads to a lack of data sharing and inefficient integration across the company, resulting in redundant efforts and inconsistencies. In addition, operational data management often suffers from siloed structures where departments maintain 'control' over 'their' data through opacity and information withholding. This protectionism hinders comprehensive data analysis and limits the organization's ability to make fully informed decisions.

Inconsistent data policies

Second, unclear and inconsistent data management standards and policies create significant governance challenges. Without a unified approach, organizations struggle to reconcile disparate 'sources of truth', leading to inconsistencies in data handling across departments – from technical standards to operational data processes. Without consistent standards and policies, data handling can become unmanageable, making it difficult to integrate and leverage data across departments. This lack of consistency leads to significant inefficiencies, duplication of effort, increased operational costs, and risks to data integrity. Moreover, employees frequently engage in ongoing debates about

"Data-driven & AI enabled" means achieving better decisions and better results on the basis of better data



Visual 1

correct methodologies and definitions, while conflicts between departments impede the goal of operational excellence in data management.

Reactive and unstructured data quality management

Third, data quality management is often hampered by a reactive approach that only addresses issues when they become critical. In fact, many organizations lack a proactive strategy and structured framework for measuring and managing data quality. Instead of establishing robust procedures to prevent problems, organizations often resort to ad hoc 'data cleansing' when data inaccuracies disrupt business operations. This short-term approach fails to address underlying systemic data quality issues, resulting in an ongoing cycle of error management that is inefficient.

Unclear and inaccessible data

Fourth, the lack of a common understanding of (master) data definitions and a consistent approach to metadata management often results in data that is intransparent and inaccessible, creating gaps and misunderstandings within the organizational data landscape. Without clear, consistent definitions of data and a well-managed metadata environment for cataloging and accessing data, organizations struggle to effectively leverage their data. This lack of clarity impedes operational processes and limits the organization's ability to leverage data for informed decision-making.

Cultural barriers

Fifth, even with state-of-the-art technology and strong governance in place, the human factor remains a significant challenge. A lack of consistent direction from top management, a culture of decision-making based on 'gut feeling,' and limited awareness of legal or technical implications are often barriers to effective data management. At the individual level, a poor understanding of the value of high-quality data, coupled with a lack of transparency about its implications, leads to poor data practices. At the organizational level, this often translates into low motivation to collaborate across silos, further hindering effective data governance. Additionally, misconceptions about compliance and data security create further obstacles, while resistance to change, and a reluctance to adopt data-driven decision-making exacerbate the problem.

How to successfully improve data foundation

The previous chapter highlighted the data foundation challenges organizations face, setting the stage for exploring solutions. Once the key challenges have been identified, comprehensive data management is the key to addressing them. The journey to a truly data-driven enterprise is multifaceted and requires a nuanced understanding of data management at multiple levels. This chapter outlines the characteristics of successful data management, serving as a navigational guide for addressing the outlined data foundation challenges.

Common vision

Successful data management starts with a unified and committed vision. Rooted in concrete business needs, this shared 'north star' aligns stakeholders toward a common goal and creates a data-centric environment. When effectively articulated from the top down, it resonates with every member of the organization, nurturing a data-centric culture from the bottom up. This vision is more than just a statement of intent; it positions data as a strategic asset, not a liability,

at both the strategic and operational levels. To be truly effective, the data strategy must be aligned with the organization's broader business objectives. It should not be perceived as 'another strategy developed by department XYZ', but as a guiding 'north star' for every data citizen, regardless of their specific role and responsibilities.

Appropriate data quality

Organizations need to invest in data quality with the same dedication as they invest in their products. Defining and implementing data quality standards should be a priority to ensure that business-relevant data is available in the required quality to support the company's data foundation. At a process level, data quality management should be designed and implemented like other key business processes, with clearly defined responsibilities and checkpoints within the process steps. When data quality management is aligned across the organization, data domains responsible for their data quality can collaborate more effectively, leveraging synergies and sharing best practices. While addressing the entire company's data inventory with a big bang approach is a significant challenge, starting with data quality in specific, most relevant domains offers rapid progress. Improved data quality strengthens the foundation for decision making, enabling more accurate and informed business decisions. For more insights into data quality, please refer to our whitepaper on data quality management in the enterprise context.

Comprehensive data map with assigned responsibilities

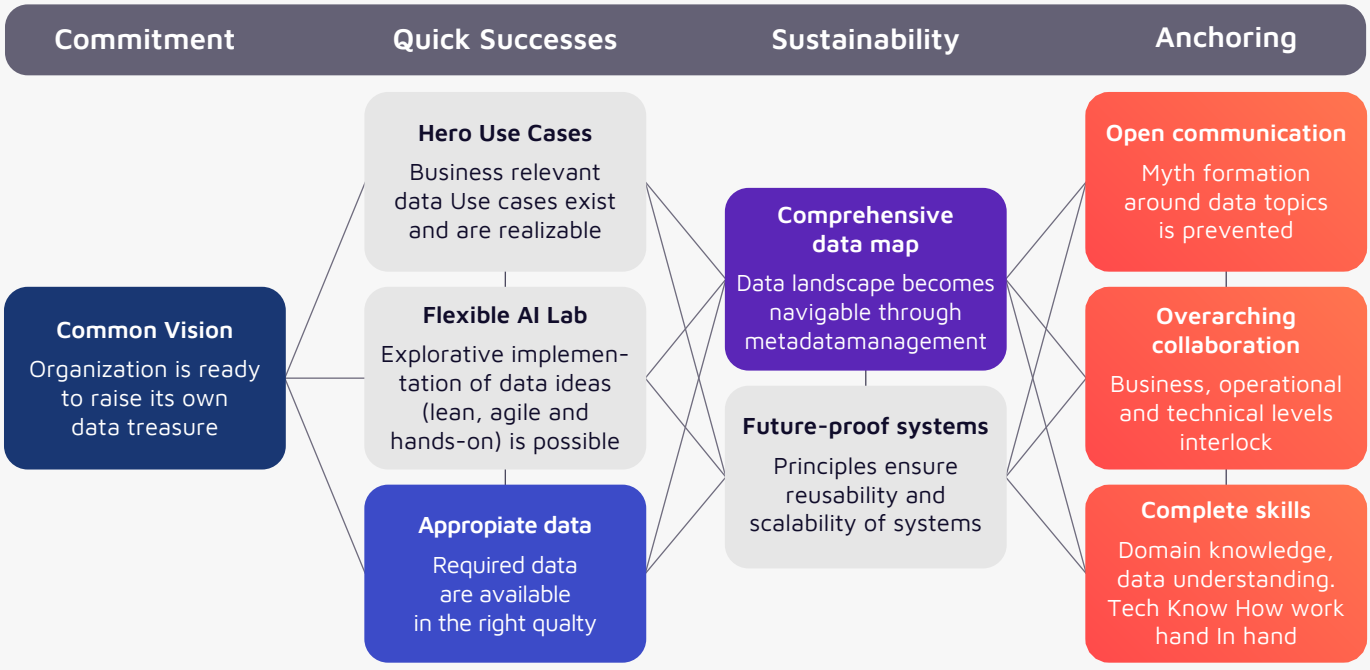
A data map - a detailed chart of the data ecosystem – divides the organization into MECE (Mutually Exclusive, Collectively Exhaustive) data domains that form the basis for assigning data ownership. A well-structured data map makes data understandable, transparent, and navigable for the organization, while remaining adaptable and extendable to organizational and business changes. When assigning data responsibilities, it is important to define clear data roles with distinct tasks and responsibilities. Establishing transparent role responsibilities and an appropriate system of permissions creates the foundation for secure and efficient data management practices. When data roles are clearly defined, stakeholders gain a comprehensive understanding of their responsibilities, resulting in increased accountability and a more streamlined approach

to managing data tasks. This helps to develop consistent data processes, guidelines, and standards across organizational silos, ensuring greater control and strengthened integrity. Moreover, when individuals understand both the scope of their data roles and the limits of their permissions, they are empowered to handle data responsibly and strategically.

Anchoring in the organization

Beyond technology, the human factor is crucial to the success of any data initiative. Open communication, interdisciplinary and cross-domain collaboration, and a broad skill set are the pillars of sustainable data management. Transparent, myth-free communication fosters a data-fluent culture. When data initiatives receive the dedicated resources and organizational focus from key stakeholders, individual motivation increases. In addition, a combination of business acumen, data literacy, and technical proficiency - coupled with a commitment to continuous learning - ensures that employees remain engaged and prepared to integrate data into daily operations and decision-making. Moreover, training formats and future-proof tools can support employees in integrating and automating data processes.

This chapter has outlined the foundational elements of successful data management. Next, we explore the role of a Data Value Office in orchestrating these elements to maximize the value of data assets, drive decision-making, and foster innovation.



Visual 2: Success factors of data transformation initiatives

What the Data Value Office does to make data and AI work

The Data Value Office (DVO) is a dedicated team or unit that drives value creation from data and leads the organization toward data excellence. Its primary objective is to improve synergies and efficiencies in data management by establishing comprehensive guidelines, a unified tool stack, and a coherent operating model. Typically led by a 'Head of Data Management' (or similar job titles) and supported by a dedicated team, the DVO implements the organization's data strategy. It sets clear objectives for data excellence that align with business goals and ensures the development and maintenance of a robust operating model. In addition to setting strategic direction, the DVO actively addresses data management challenges by providing standards, resources and expertise, and promotes data-driven decision-making across the organization. It operates at all levels of data management - strategy, governance, and technology - empowered to drive broader organizational transformation initiatives. The following sections provide an overview of the most important tasks and responsibilities of a DVO.

Define a common data and AI strategy

The DVO works together with the C-level and business units to define a data and AI strategy

that aligns with the overall business strategy. A comprehensive data maturity assessment serves as a solid starting point for developing the data strategy. For example, more mature organizations often move toward a Data Mesh strategy with federated governance and self-service data products. For more insights, read the whitepaper From data to value with Data Mesh. A long-term strategy should be broken down into smart Objectives and Key Results (OKRs) that the DVO monitors and manages throughout the journey to the data vision. Additionally, the DVO ensures consistent and transparent communication around the data strategy and objectives.

Manage the data and AI portfolio

The DVO manages and implements high-value use cases and data products (e.g., BI reports, analytics, forecasting, Artificial Intelligence) to realize business value. It oversees the data portfolio management process, from identification and prioritization of new or existing data products to their implementation. Ultimately, the DVO is responsible for ensuring that use cases and products with the highest business potential are prioritized and promoted. In some cases, the DVO runs a dedicated 'Data Lab' staffed with Data Engineers, Scientists and Analysts who develop data products tailored to business units.

Master federated data governance

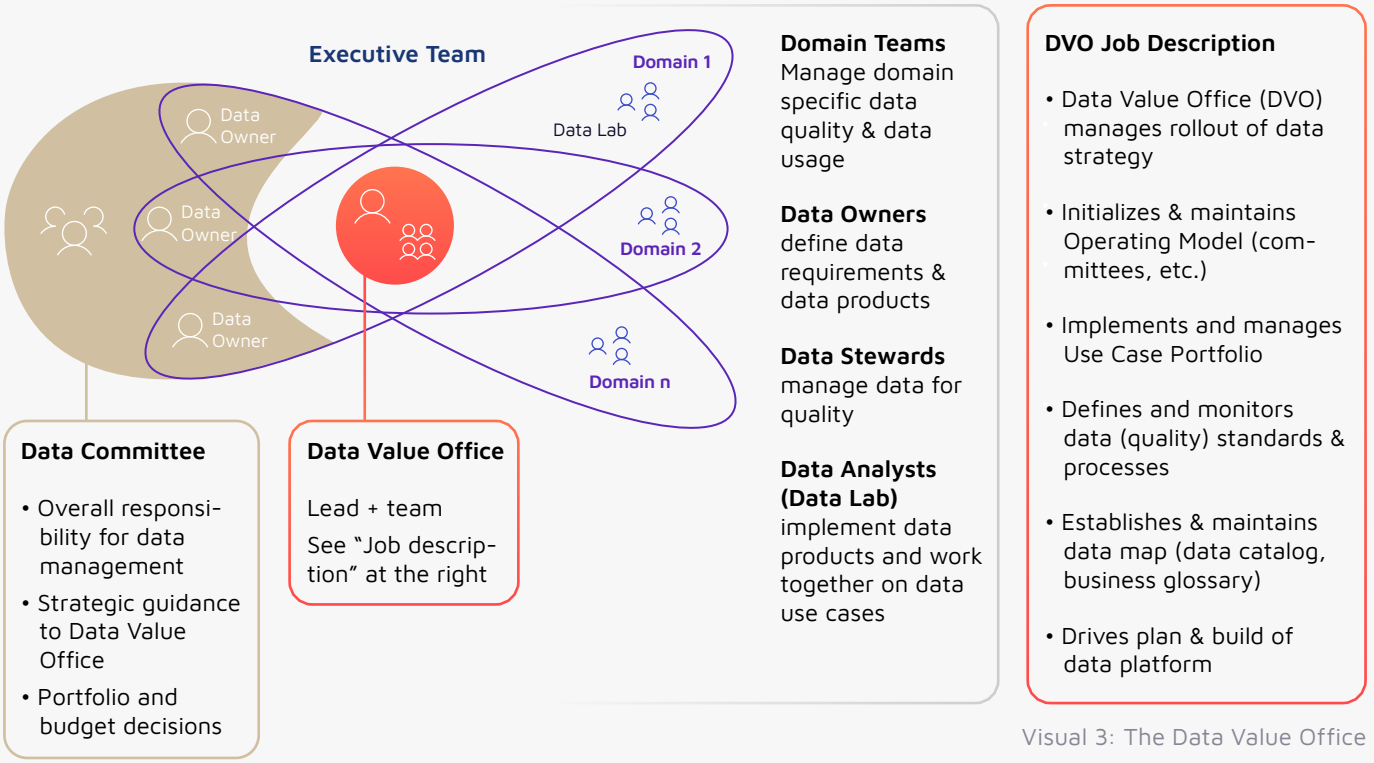
A key responsibility of the DVO is to design and establish appropriate Data and AI governance that is tailored to the organization's context. While most organizations thrive on a federated, hybrid approach to data governance, in some specific cases, a more centralized data governance approach may better suit the needs of companies, depending on factors such as the size, footprint, and data maturity of the organization. One essential component of a data governance framework are organizational roles and responsibilities. The DVO sets up a decentralized data ownership structure by establishing clear data domains, each with specific responsibilities assigned to Data (Domain) Owners, Data Stewards, and Data Analysts.

Data Owners establish data definitions, requirements and policies, and ensure adherence to established data management practices within their data domains. Data Stewards are

responsible for overseeing data quality and ensuring that data is accurate, complete, and reliable. Data Analysts develop data products to support decision-making. Particularly in the application of AI, domain expertise is crucial to accurately interpret AI-generated insights. The success of federated data management depends heavily on the effectiveness of decentralized data responsibilities, with the DVO overseeing coordination across domains.

Push central data governance where needed

The DVO enforces consistent data governance processes and standards and ensures that data practices adhere to established norms across all data domains. It is responsible for defining a comprehensive data process map that covers critical operational data management processes such as master data management, data quality



Visual 3: The Data Value Office

management, and data requirements management. These processes are then continuously developed, refined, and scaled as needed. The DVO also ensures that organizational-level processes such as planning, reporting, and escalation management are centrally defined within the data governance framework and implemented across all data domains. Additionally, it sets technical and procedural standards for data handling, including storage, transformation, and interfaces.

Make the data treasure available

The DVO is responsible for making organizational data understandable and accessible through a data map, business glossary, and data catalog. The comprehensive data map provides a structured view of data assets, including master data, transactional data, and aggregated data (such as KPIs), helping to visualize and classify an organization's data landscape and its data objects. The business glossary serves as a single source of truth and promotes a common understanding of data, including its quality criteria and ownership. On a technical level, the data catalog documents technical metadata, data models, and data lineage – tracing the path of data throughout its lifecycle, from source to usage across respective systems.

Lead data architecture evolution

Furthermore, the DVO plays a key role in selecting, developing, and maintaining the organization's data platform, ensuring it aligns with the company's data strategy. A well-maintained data and AI platform is essential for data collection, storage, processing, and analysis. To reduce technology costs, ensure manageable platform maintenance, and align the data tool stack with overall business domain requirements, it is essential to centrally manage the data technology stack. A prime example of this is a centrally managed data catalog that serves as a single source of truth for metadata management, improving transparency and accessibility for data citizens across the entire organization.

Excel the operating model

The DVO initiates and shapes the operating model for data management. Working with a 'Data Committee', the DVO ensures that direction and decision-making are aligned with the organization's data strategy. In addition, overall data quality is treated as a critical factor at the strategic level. At the operational level, the DVO fosters a consistent and collaborative modus operandi across decentralized data domains by facilitating regular 'Data Communities' and other alignment and communication formats. This collaborative effort is critical to the seamless implementation of data governance.

Guide the data transformation

Finally, as an ongoing effort, the DVO acts as a company-wide catalyst for data transformation, shaping an approach that is both practical and sustainable for the organization. Similar to other change initiatives, its key responsibilities include empowering data citizens and promoting open communication and collaboration. The DVO team cultivates an organizational environment where data-driven insights are valued and seamlessly integrated into decision-making at all levels - from top management to daily operations, and from complex analysis to routine decisions. With the growing adoption of (Gen)AI applications in the business environment, it is particularly important to equip employees with data literacy through targeted training and upskilling formats. At the same time, the DVO plays a critical role in guiding the data domains through the step-by-step rollout of federated governance and enabling data roles to evolve in line with new responsibilities. In general, motivating employees to embrace their new data management roles is a critical aspect of data transformation. To achieve this, the DVO may foster cross-domain

knowledge sharing and promote success stories to reduce data silos and embed a new governance model throughout the organization.

How to get started

Knowing what a DVO does leads to the question of where to start. To build a DVO, several design decisions must be made within the specific context of the organization, including:

- Should it be a centralized center of excellence at the corporate level, or do we need DVOs at the business unit level?
- How should the DVO be named to fit the company's jargon?
- Who at the management level will sponsor its activities?
- How much budget should be invested in data activities and how should it be allocated?
- What are the overall mandate and objectives of the DVO based on the current data maturity?
- Who is the right candidate to lead the DVO? How many team members are needed?
- What are the first, most important tasks for the DVO to get started?
- What is on the roadmap?
- How should the DVO be integrated into the line organization in the mid-term?

In summary, the DVO serves as an indispensable enabler for a data-driven organization by proactively addressing current data challenges while setting and pursuing strategic goals for long-term, value-creating data and AI management. In this role, the DVO is the architect and strategist of a sustainable data initiative. At valantic, we specialize in designing, initiating, and scaling data transformations across multiple contexts and industries. With our extensive experience, we can help you find the right solutions for your data challenges.

Conclusion

In today's AI-driven business landscape, organizations cannot afford to overlook the importance of a strong data foundation. While data management and governance are often seen as an operational burden ('unwanted liability'), they are actually the backbone of successful data and AI initiatives. Yet many organizations continue to struggle with persistent challenges, including unclear roles and responsibilities, fragmented data silos, inconsistent data standards, insufficient data quality, and a lack of transparency over the data landscape. These challenges not only undermine operational efficiency and the ability to make informed decisions, but also pose significant risks when developing and integrating data and (Gen)AI products into business processes.

This paper highlights the key success factors for overcoming these challenges: a unified vision, proactive data quality management, and standardized policies. Additionally, a comprehensive data map, transparent data ownership, and organizational anchoring are essential components of effective data management. A Data Value Office establishes the framework needed to orchestrate and oversee data and AI management, ensuring both short-term success and long-term scalability. Led by a data leader, the DVO drives strategic and operational initiatives, provides overarching guidance, fosters the development of valuable data products, masters data governance and quality, and enhances data literacy. This approach enables organizations to effectively address current data challenges while positioning themselves for future opportunities and driving toward data excellence. **As such, the DVO is the focal point for any organization striving to become data-driven and AI-enabled.**

To successfully build a data foundation and implement effective data management, expert guidance can make a difference. At valantic, we specialize in establishing DVOs, designing data strategies, and establishing data governance frameworks tailored to your organization's unique needs. With our expertise, we help transform data governance from a challenge to a strategic enabler - making data and AI work for your business.

About the authors

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Leading the Data Governance and Management Chapter at valantic, Julia's professional passion revolves around the management of data. With a Master's degree from the Technical University of Munich, she has developed her expertise in Data Governance through numerous data and IT transformation projects within the telecommunications and industrial sectors. Her extensive knowledge spans from analyzing the status quo of data maturity to assisting clients with the pragmatic implementation of customized data governance models.

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With profound expertise in data strategy and data transformation, Nadia combines strategic business acumen with deep technical proficiency in data analytics and business intelligence. Her focus in client work is transforming complex business challenges into effective data solutions and guiding clients in identifying and prioritizing high-impact data initiatives.

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