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A Practical Data and Analytics Strategy and Operating Model for Midsize Enterprises

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Initiatives: Midsize Enterprise IT Leadership

CIOs in midsize enterprises need to prioritize data and analytics activities in support of tangible business outcomes. Gartner’s data and analytics strategy and operating model (DASOM) will help them develop a comprehensive, adaptive and agile strategy and model.

Overview

Key Findings

- Although data and analytics (D&A) is considered a game-changing capability for midsize enterprises (MSEs), too many D&A initiatives are still technology-centric, lacking alignment with business strategy and failing to achieve measurable business impact.

- MSEs could derive value by making use of all the rich D&A capabilities available in the market. However, they may struggle to hire and retain the specialist skilled resources needed.

- Levels of data literacy and analytics maturity within midsize lines of business are typically still low, further inhibiting progress.

Recommendations

To derive more measurable business value from D&A, CIOs in MSEs should:

- Transform the business vision into a pragmatic, flexible and adaptable strategy by applying the Gartner D&A strategy and operating model (DASOM).

- Link business objectives and modes of operation to D&A investments by further analyzing “soft” benefits and tracing them through to the resulting “hard” benefits.

- Identify D&A capability gaps to fill in order to improve execution.
Design a D&A operating model to encourage more analysis, enable better understanding and foster a change of business culture.

**Strategic Planning Assumptions**

- By 2024, a scarcity of data scientists will no longer hinder the adoption of data science and machine learning in midsize enterprises.
- By 2024, a major proportion of the tasks currently performed by managers will have been automated, thus requiring a complete overhaul of the role of the manager in a midsize enterprise.
- Through 2025, 80% of midsize enterprises seeking to scale digital business will have failed because they do not take a modern approach to data and analytics governance.

**Introduction**

CIOs in midsize enterprises (MSEs) consistently list business intelligence (BI) and D&A among their top priorities. ¹² But however strongly they focus on these, Gartner has identified challenges that can particularly inhibit their progress with D&A (see also Figure 1):

- MSEs have limited scope to deploy the specialist resources available for D&A. They struggle to retain staff and are more vulnerable to skills shortages in these areas than their large-enterprise counterparts.
- Budget constraints within MSEs can lead to an emphasis on acquiring technology and implementing new applications with sustainability in mind. However, sustainability is not necessarily a goal of every developed analytics application; value often derives from ad hoc, exploratory analyses, with the model effectively being disposable after the identified value scenario has been actioned.
- Engagement with a channel partner or value-added reseller (VAR) will not yield the same benefits within the field of D&A as it typically would within other technology disciplines, as D&A is underrepresented within the capabilities of the VAR community. Furthermore, consultancies and service providers can be difficult to access. Projects conducted by MSEs may not be large enough to attract the major providers, and it can be challenging to find smaller regional providers with strong D&A practices.
Levels of data literacy and analytics maturity within lines of business are typically low. Having the IT department develop prescriptive analytics algorithms is one approach to overcoming this obstacle, if its staff have the skills. However, these algorithms can still prove time-consuming to develop and difficult to implement organizationally, due to change resistance. Overall, the emphasis must be on education and coaching in order to raise levels of D&A literacy and foster a more data-driven business culture.

Figure 1: Typical Challenges to Data and Analytics Initiatives for Midsize Enterprises

As every business strives to become a digital business, it is increasingly important for MSEs’ business strategy to center on D&A (see also Survey Analysis: Midsize Enterprise CIOs Must Seize Opportunities to Play Their Role in the Business Strategy and How to Make Data and Analytics Central to Your Digital Transformation Initiative). A comprehensive D&A strategy sets the pace, direction and cadence of an organization’s approach to business. This enables better communication of scope and business impact between leaders responsible for driving analytics programs and continuous improvements in decision making.

Success with D&A is not primarily about technology, but rather about establishing a business-oriented approach.

Analysis
Conventional Data and Analytics Strategy and Service Delivery Cannot Satisfy MSEs’ Digital Business Demands

The typical approach to creating D&A strategy is based on a set of conditions that are rapidly becoming outdated and irrelevant for digital business. These include:

- **D&A not being the catalyst:** The IT function responds to demand generated by other business changes (such as demand for data and insights to support changes to business practices, processes and systems), rather than instigating changes to help business people consider data and insights first (in other words, to help them evaluate "how, with this data or this insight, we could fundamentally change the way we do x").

- **D&A not being a competency practiced by all:** The D&A function acts as a supporting service function from within the IT department, one that merely satisfies demand and delivers raw capabilities to a target audience.

- **D&A strategy not reflecting shared objectives and common actions:** It assesses collective demand and then devises priorities and work plans, so that the team can satisfy that demand.

- **D&A merely aligning with, rather than instigating, business strategy:** Success means “D&A program success” against requirements and the D&A team’s objectives.

To start and sustain transformational initiatives in which D&A is integral and pervasive, MSE CIOs and other business leaders are realizing that existing approaches to traditional planning are wholly inadequate. It is impossible to be a digital business without being a genuinely data-driven enterprise. Both IT and business leaders have larger ambitions and, increasingly, D&A is part of every business discussion about digital transformation (see also 4 Data and Analytics Personas for Midsize Enterprise CIOs).

Accordingly, MSE CIOs need a new approach to D&A strategy, based on new assumptions:

- **D&A strategy is a business strategy infused with D&A thinking:** it plays a primary role in digital business strategy, one that affects everything an organization does.

- **A D&A ecosystem can fundamentally shape a business** and reinvent how it creates and delivers value in terms of internal data assets, externally sourced data and insights.
The D&A function serves as an enabler of, and a collaborator for, problem solving by bringing an enterprise perspective about D&A to domain problem solvers. It is also a community and competency builder, as well as a service center with projects, programs and products.

A D&A operating model represents the integrated set of operational competencies and capabilities (of resources, processes and structures) throughout an enterprise that is required to execute the strategy.

Success is determined by the degree of data-driven transformation achieved, the progress toward achieving desired stakeholder outcomes and the cross-enterprise improvement of D&A capabilities.

Transform the Business Vision Into a Pragmatic, Flexible and Adaptable Data and Analytics Strategy

Gartner’s D&A strategy and operating model (DASOM) enables MSE CIOs to create a strategy that meets the needs of a modern, forward-looking organization. The focus is on creating a set of capabilities to support the wider business and digital strategy, and thus to achieve higher-level business outcomes (see Figure 2).

Figure 2: The DASOM Links Data and Analytics Strategy to Digital Business Outcomes

The DASOM uses the following definitions:
By taking the approach described in this document, MSE CIOs working with stakeholders can inventory and evaluate which D&A capabilities are present and which are missing. D&A capabilities and services should no longer be limited to the IT department or a core D&A team. Rather, the DASOM enables a collaborative, cooperative and consistent approach to D&A capabilities throughout an organization. It requires MSE CIOs to focus on the broader goal of achieving desired business outcomes, including digital strategy and transformation. Even if a digital strategy is struggling to demonstrate business value, the DASOM can help relaunch it in a more effective form. Additionally, the DASOM carries strategy decisions forward into action, through its emphasis on delivery capabilities and prioritization.

The approach is dynamic — it is not a rigid, step-by-step technique. Think of it more as a set of related conversations with stakeholders. The D&A strategy and the operating model are intimately related, which means that a change in one element is likely to affect choices in others. For example, during a conversation about value propositions, you might discover a use case that satisfies an unmet market need. That use case may then lead to your organization creating a new information product.

Work on the parts that apply to your enterprise, to the extent appropriate for your enterprise. A simply defined strategy that is executed well is likely to be more effective than something more comprehensive but not deliverable in practice.

Further reading:
Link Business Objectives and Modes of Operation to Data and Analytics Investments

Gartner’s reviews of hundreds of D&A strategy documents every year indicate that only 15% of organizations have concrete performance indicators for their proposed strategy (see Align AI, Data and Analytics Strategies to Measurable Metrics for Desired Business Outcomes and Note 2).

Other insights gained include the following:

- Business cases for D&A typically focus on technology requirements and delivery activities, rather than the drivers and outcomes that matter to business stakeholders.
- MSE CIOs often struggle to articulate the underlying outcomes or the expected benefits of the D&A solutions they request.
- It can be difficult to link D&A capabilities to business outcomes or to identify “hard” benefits such as increased revenue or improved operating efficiency and customer service.

Discussing and defining the strategy elements of the DASOM — namely data-driven vision, stakeholder outcomes and value propositions — enables MSE CIOs to overcome these challenges and give focus to their D&A investments. This is not a “boil the ocean” exercise. It is about changing the strategy conversation in an enterprise to ensure its D&A initiatives help deliver meaningful business outcomes.

Create a Data-Driven Vision
MSE CIOs need to be proactive and clear about how they contribute to the overall business and societal purpose of their enterprise. An effective data-driven vision relates D&A to the organization's business purpose, preferably expressed in terms of customer value (see Dare to Dream! Give Your Data and Analytics Programs a Mission to Transform Business and Improve the World). It is as basic as a mission statement that captures intentions. It can be expanded with business model analysis using Gartner’s Business Model Framework (see Digital Business Models Compendium) and exploration of data monetization opportunities that could create new profit centers, but, at minimum, the vision must:

- Align with the company’s overall mission and explain how D&A contributes to the overall purpose.
- Focus on external stakeholders and “the bigger picture,” not just internal decision making.
- Be relevant, specific and unique to the organization.
- Be inspiring and authentic, in order to make a real difference.

**Identify Stakeholder Outcomes and Value Propositions**

MSEs are typically resource- and budget-constrained, which leads to an expectation that any business case for D&A must be definitive before any investment is made. Identifying stakeholders, their strategic goals and, in particular, the unmet needs that represent new business opportunities permits more targeted value propositions with clear causal linkages between D&A solutions and business benefits (see Figure 3 and Tie Your Data and Analytics Initiatives to Stakeholders and Their Business Goals).
Ideas for actions to pursue include:

- **Demonstrating business value while investing in innovation.** It is imperative to communicate clearly the importance of aligning the D&A strategy with the business perspective. Aligning business and analytics is meant to identify key drivers for the business and ensure that the D&A services align. MSE CIOs must also expound the value of D&A to the business. It is wrong to assume that all business leaders are fully aware of the variety of D&A capabilities available today and of the value they could bring. (See also Data and Analytics Use Cases for Midsize Enterprises, Midsize Enterprises Need to Get More Value From Data and Analytics Investments, For Midsize Enterprises, the Value of Data and Analytics Goes Beyond Cost Optimization and Applied Infonomics: How CIOs in Midsize Enterprises Can Monetize Their Data.)
Analyzing “soft” benefits further in order to trace “hard” benefits. Any underlying improvements in culture, process or behavior can have a significant impact on the overall performance of an organization. “We’ll make better decisions” is a false argument. Soft benefits that arise from a more analytical approach should be traceable in some way to actionable, measurable and “hard” outcomes — ideally with a financial impact (although the contribution may not necessarily be direct or fully causal). Time saved by making a process more efficient should translate into new, more-value-adding activities. Improved resource utilization in a small team should be reflected in opportunities for innovations and so on. (Example: A better-targeted customer list = sales teams offering best-fit products to their prospects = a measurable increase in sales) (See also Complete Your Data and Analytics Strategy With a Clear Value Proposition and How CDOs Can Get Buy-In and Sell Data and Analytics to Stakeholders.)

Recognizing the potential for tension between effectiveness, efficiency and risk drivers. Line-of-business leaders typically set investment objectives based on enhanced enablement and business effectiveness within the markets they serve. However, CFOs and technology-centric CIOs often evaluate an investment agenda based on an efficiency-based or risk-based approach. These diverse categories of investment drivers may be in conflict, with each stakeholder group being motivated and incentivized differently. Budget-conscious MSEs may overemphasize cost savings to the detriment of innovation and growth opportunities. In establishing the vision for a D&A solution, MSE CIOs should seek to explicitly identify the tipping point between cost-control/risk-averse choices and higher levels of business effectiveness. They should identify the right business outcomes for each business case. (See also For Midsize Enterprises, the Value of Data and Analytics Goes Beyond Cost Optimization.)
Identify Data and Analytics Capability Gaps to Fill in Order to Improve Execution

The key to connecting strategy to operating model is to identify what capabilities the strategy requires for successful execution. The more complex your preceding strategy analysis, the more challenging and detailed this phase becomes. Figuring out how to implement a best-practice value proposition is less complex than launching a transformation initiative.

MSE CIOs should facilitate a clear-cut evaluation by IT and business stakeholders of gaps in capabilities in relation to the following, for example:

- Core D&A competencies (availability of specialist skills and data literacy)
- Culture/organization (ability to act on data, structure and change management)
- D&A governance (principles, policies, responsibilities and outcomes)
- Processes (life cycle management and priority management)

Challenging existing assumptions, practices and silos. D&A can unlock new opportunities to derive measurable business value. Traditional business models and process improvement methods (total quality management, Lean Six Sigma, Kanban, etc.) all focus on motivating business function managers to optimize the current localized process. In other words, we have developed an entire business operating model and business culture oriented toward executing the current process (“doing”), rather than analyzing, understanding and changing (“thinking”). MSEs may be particularly vulnerable to this phenomenon, as they often rely on doing one thing well as their main mode of differentiation. MSE CIOs may be wrapped up in this “doing” mentality — in making every part happen in an efficient and effective a way as possible, including streamlining the operating costs. This is where D&A capability comes into play. Find specific business scenarios and pilot opportunities where there is the appetite to challenge existing assumptions, practices and silos. Use D&A as the stimulus to unlock new opportunities for business value on a pilot basis, building momentum for a broader approach. Inject “thinking” into every aspect of the business at any point where there is a potential point of breakdown. The CIO’s role should be to encourage and foster a business culture that includes “thinking” as well as “doing.” (See also A Data-Driven Culture Is Vital to Digital Business Success for Midsize Enterprises and Top 10 Strategic Technology Trends: How Midsize Enterprise CIOs Can Deliver Business Value by Addressing Data Privacy and Digital Ethics.)
Be honest, resilient and courageous in calling out inhibitors. To make progress with a new D&A solution, any prior reasons that have hampered progress need to be brought into the open. Explicitly identifying any underlying inhibitors will help to overcome any objections and show that there is a way forward, if those inhibitors can be removed or mitigated. In particular, take account of personal attitudes, unhelpful behaviors and change resistance. Being explicit about the reasons for previous failures requires honesty, resilience and courage.

Such bravery is necessary if the organization is to confront these failings and make changes. Calling out the unspoken barriers to success and proposing a positive way forward can be especially helpful for brokering a mutually agreeable solution when there has been conflict between parties.

Further reading:

- 5 Pitfalls to Avoid When Designing an Effective Data and Analytics Organization
- Create a Hybrid Centralized and Decentralized Data and Analytics Organizational Model
- Tool: Communicating the Need for Data Literacy Improvement
- Toolkit: Data & Analytics Organizational Skills and Models
- 4 Steps to Select Data & Analytics Services That Match Your Needs

Design Your D&A Operating Model

After the capabilities evaluation, you have a skeleton for your D&A strategy that you can begin to communicate and socialize. But the success of any strategy lies in the execution. Your D&A operating model is the integrated set of operational competencies and capabilities (resources, processes and structures) required to execute the strategy successfully.

The D&A strategy and the operating model are intimately related, with a change to one element likely to affect choices in others. It consists of the D&A ecosystem, architectures and the delivery model.
By definition, there is complexity here. Take time to learn and reflect. Not everything needs to be tackled in the first pass.

Define the D&A Ecosystem

The D&A ecosystem identifies the D&A capabilities required to achieve the value propositions and to achieve stakeholders’ desired outcomes. It includes:

- Internal data
- External data and partnerships
- Open data
- Algorithms and analytical models
- Governance
- Information life cycle management capabilities

Ensure your organization plays by the rules of D&A governance (see How to Get Started With Data and Analytics Governance in Midsize Enterprises). D&A governance will help organizations balance the opportunities and risks of digital business. By establishing the “rules of the game” for D&A governance, supporting business objectives and using different approaches for different types of analytics, CIOs in MSEs can move to the next level with their D&A capabilities. This includes being able to clearly communicate the quality, validity and, ultimately, the trustworthiness of D&A (see Answers to Important Data Quality Questions for Midsize Enterprises).

Global trends toward digital business and an increasingly digital society are also driving the need to make analytics an integral part of any business strategy. This entails the risk of inaccurate, insufficient, illegitimate or unethical application of analytics, if based on untrusted information. The questions “Could it be analyzed?” and “Should it be analyzed?” must become an integral part of an organization's information, and more general, governance models.

Further reading:

- 7 Must-Have Foundations for Modern Data and AnalyticsGovernance
Define the Required Data and Analytics Architecture

Create a target-state reference architecture for data management and analytics capturing:

- An overview of source systems, internal and external
- Data management and integration styles, such as data warehouse, data lake and data virtualization
- D&A access styles, such as portal, workbench, laboratory and API to other systems
- Supporting architecture for master data management, data quality management, information security and metadata management
- Assessment of platform, architecture and technology capabilities and deficits

Modern D&A platforms increasingly support capabilities for multiple user types and use cases. This makes different tools and methods much more accessible, especially with cloud-based SaaS and pay-as-you-use licensing models becoming more common. However, while new tools can act as catalysts for change, they are not a panacea. Much can be achieved without spending a lot on new technology. In all likelihood, MSE CIOs will need to implement a portfolio of D&A solutions and services, sized to match business appetite and demand.

Further reading:

- Midsize Enterprise Playlist: Data and Analytics Technology Trends for Building a Data-Driven Enterprise
- 3 Questions That Midsize Enterprises Should Ask About Data and Analytics
- Midmarket Context: ‘Augmented Analytics Is the Future of Data and Analytics
- Modern Data and Analytics Requirements Demand a Convergence of Data Management Capabilities

Create a Delivery Model

The delivery model defines what is needed to fulfill your strategy, and how it will be implemented. Specifically, it determines:
Although focusing on the business perspective is important, CIOs in MSEs also need an effective D&A organization. In MSEs, this is likely to be achieved by the collaborative and coordinated efforts of a virtual D&A team comprising multiskilled line-of-business “citizen” analysts as well as specialist technology staff.

D&A roles, including the emerging leadership role of chief data officer (CDO), may be undertaken as part-time duties, rather than by full-time specialists. MSE CIOs should evaluate the core organizational capabilities needed to establish a baseline level of D&A delivery and orchestrate the virtual team in such a way as to ensure its members focus on meeting business goals.

Note also that if your enterprise is in the early stages of its D&A journey, it may require the appointment of a CDO and changed organizational reporting structures. Traditionally, D&A services are part of the IT function, but increasingly they report to parts of the organization outside that function, to an “office of the chief data officer” or equivalent. 3

Steps to take include:

- How resources are allocated (resource centers, functional assignments and communities, for example).
- How delivery will be managed (project, program and product delivery, for example).
- What competencies, skills and culture activities are needed.
- How the people and the teams who will do the work will be organized.

Steps to take include:

- Consolidating the organization and its roles, capabilities and deficits
- Assessing plan-specific roles, responsibilities and organizational implications
- Resolving interdependencies
- Creating an organizing model and organizing work into projects, programs and products that deliver on the related vision, desired outcomes and value propositions
- Developing recommendations for closing gaps
- Time-sequence initiatives and establishing guidance and cost estimates for their implementation

Note also that if your enterprise is in the early stages of its D&A journey, it may require the appointment of a CDO and changed organizational reporting structures. Traditionally, D&A services are part of the IT function, but increasingly they report to parts of the organization outside that function, to an “office of the chief data officer” or equivalent. 3
Combining vision, stakeholder outcomes, value proposition and operating model into a complete and compelling strategy with initiatives and roadmaps

Securing funding, assigning resources and starting executing on strategy

Further reading:

- Why Midsize Enterprises Need a Chief Data Officer
- How to Enable Citizen Analysts to Drive Business Value in Midsize Enterprises
- Accelerate Digital Business Aspirations by Becoming a Data-Driven Enterprise
- Essential Capabilities That Your Analytics Center of Excellence May Be Lacking
- Build a Data Quality Operating Model to Drive Data Quality Assurance

Evidence

1 Respondents from MSEs in the 2021 Gartner CIO Survey ranked D&A and AI/ML as the top two “game changer” technologies for 2021. Meanwhile, 60% of MSE respondents selected business intelligence/data analytics as the technology area with the largest planned amount of new or additional funding in 2021.

The 2021 Gartner CIO Survey was conducted to inform CIOs about how to prosper in the post-COVID-19 world. It was conducted online from 14 July 2020 through 14 August 2020 among Gartner Executive Programs members and other CIOs. Qualified respondents were the most senior IT leader (CIO or equivalent) for their overall organization or a part thereof (for example, a business unit or region). The respondents included 574 from MSEs from a total sample of 1,877, with representation from all geographies and industry sectors (public and private). The survey was developed by a team of Gartner analysts. It was reviewed, tested and administered by Gartner’s Research Data and Analytics team.

Disclaimer: The results of this survey do not represent “global” findings or the market as a whole. They reflect the views of the respondents and companies surveyed.

2 Twenty-seven percent of MSEs responding to Gartner’s 2020 Chief Data Officer Survey reported that they consistently produce clear business value for their organization from their investments in D&A.
This survey was conducted to explore the business impact of the CDO role and/or the office of the CDO. It was conducted online from September through November 2020 among 469 respondents from across the world, 93 of whom represented MSEs (organizations with annual revenue of $50 million to $1 billion). Respondents were required to be the highest-level D&A leader, the CDO, the chief digital officer, or the leader with D&A responsibilities in IT or in a business unit. The survey sample was gathered from a variety of sources (including LinkedIn), with the greatest number coming from a Gartner-curated list of over 2,000 CDOs and other high-level D&A leaders. The study was developed collaboratively by Gartner D&A analysts and the Primary Research Team.

Disclaimer: The results of this survey do not represent “global” findings or the market as a whole. They reflect the views of the respondents and companies surveyed.

3 Sixty-nine percent of MSE respondents to Gartner’s 2020 Chief Data Officer Survey indicated that they reported to someone other than the CIO, chief technology officer or vice president of IT.

Note 1: Examples of Data-Driven Vision

A good example is the following data-driven vision of a pharmaceutical company:

- “We strive for a world where information provides actionable insight to prevent, detect and predict diseases of all kinds, and improve people's lives.”

Examples to avoid:

- “We help managers make better decisions” (this was a traditional goal, when D&A was a support function).
- “We create high-value solutions, with perfect data quality, based on the most modern technologies, to align all business functions with new insights, while continuously driving cost down” (very generic and not unique, and not focused on customer value — in fact, not focused at all).

Note 2: D&A Strategy Documents

These documents can go by different names. They have also been called plans and strategies. They have been about information, data, analytics or big data.

Document Revision History
Recommended by the Authors

Some documents may not be available as part of your current Gartner subscription.

Build a Data-Driven Enterprise

The Future of Data and Analytics: Reengineering the Decision, 2025

How to Present Your D&A Program to the Board

Inside View: Attributes of a Good Data and Analytics Strategy

Data & Analytics Strategy Workbook

The State of D&A Organizations and Roles Is in Flux: A Gartner Trend Insight Report
Actionable, objective insight

Position your IT organization for success. Explore these additional complimentary resources and tools for midsize enterprises:

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