

A stylized graphic of a staircase in dark blue, ascending from the bottom right towards the top right. The steps are represented by horizontal bars of varying lengths, and the railing is composed of several parallel lines. Two vertical orange bars are positioned on either side of the main title.

Design a Data and Analytics Strategy

Advance your organization's strategy by communicating the business value of data and analytics

Edited by
Andrew White, Distinguished VP Analyst, Gartner

Introduction

Digital business success hinges on modern and effective data and analytics. Although organizations are beginning to understand the business value of data and analytics, taking the first steps toward integrating data literacy into the business can be intimidating. But organizations that fail to properly utilize data assets will be left behind.

By reading this e-book, data and analytics (D&A) leaders and other executives will understand the importance of creating a clear, modern and business-relevant data and analytics strategy communicated across the entire organization and can begin to decide the best approach for their own organizations.

Will the team use data to enable the business to meet its goals more effectively? Build a new P&L product line based on data assets? Simply do nothing?

(Spoiler alert: Don't do nothing.)

As part of the strategy discussion, leaders must decide how to ensure data literacy, data and analytics governance, and data quality. Data teams may speak data fluently, but other parts of the business may struggle to understand. Be a good teacher and a good partner, and watch your data and analytics strategy flourish.



Why data? Why now?

A student majoring in physics at any university is likely to be required to take a foundational math course such as freshman algebra before going on to more advanced studies. Even if a student receives a C for the class, most universities consider a passing grade good enough to move to the next level.

Georgia State University realized that data like this could be used to flag potential problems before they develop into larger issues that would prevent student graduation. The university uses predictive analytics with over 800 alerts and 10 years of data to help identify current students who are at risk of not graduating, including those who receive grades in early classes that may indicate they will have trouble progressing in a chosen academic track without additional help.

Once at-risk students are identified, they are required to meet with advisors to discuss potential solutions, such as taking a remedial math class or considering a different major. Using

analytics to guide 55,000 advisory meetings with students annually has contributed to the university increasing its graduation rates by seven percentage points and closing the socioeconomic gap that exists for graduation rates at many other institutions.

The truth is that data and analytics are complicated, but the results can be powerful. For a university, it's higher graduation rates. For a business, the results could be increased profit, a new product or an entirely new business model.

A successful initiative requires a cultural and mindset shift by which data and analytics moves from supportive and secondary to fundamental for digital business transformation. It becomes central to how organizations do what they do, every day, every time.

But it's worth it.

“The potential for data-driven business strategies and information products is greater than ever,” says Andrew White, Distinguished VP Analyst, Gartner.

For some enterprises, data and analytics has become a primary driver of their business.

These businesses make data a part of everything they do, which means they ask the right questions:

“With this data, or this type of insight, how can we fundamentally change the value propositions for our customers?”

“How can we deliver new value propositions?”

“How does the business process and response change given this new insight?”

Answering these questions, or even knowing to ask these questions, is the result of an expanded set of data and analytics competencies and the embracing of data literacy across the organization. It’s not only for traditional business outcomes, either.



Data for good

In 2007, the then-CEO of Nationwide Insurance discovered the low high school graduation rates in his hometown of Columbus, OH. The company’s data and analytics experts donated their time to provide data that measured proficiencies and identified an early warning for struggling students. This pro bono project was so successful that it was spun off into its own nonprofit.



“Data and analytics success over competitors requires a much more expansive role for data and analytics in business value generation,” says White.

Organizations need to get smarter at understanding what outcomes can be improved, and what investment across data and analytics drives those outcomes. It might be an investment in data quality, or artificial intelligence, or data virtualization or other options.

A clear strategy, which also considers data quality, data governance and data literacy, is vital to the success of a data and analytics investment.

“Data and analytics success over competitors requires a much more expansive role for data and analytics in business value generation.”

Focus on the strategy

A data and analytics strategy is what emerges when an organization connects a vision with outcomes and a value proposition.

Start with a common understanding of the mission of the organization. From there, prioritize which business outcomes matter the most, and use that priority list to target a data and analytics strategy. Remember to focus on delivering business goals.

Generally, three kinds of trajectories can be used for looking at a data and analytics strategy. They tend to focus on:

- **D&A as a utility** — A generic capability. It should be available to everybody for myriad requirements and for all kinds of intended business value.
- **D&A as an enabler** — Always targeted toward a specific business goal. Secondary value should come from reusing the data and analytics for other business purposes.
- **D&A as a driver** — A means to achieve new business goals. New tools can uncover new insights, and new data types can lead to new business questions; both drive new business ideas and revenue sources.



Why you need a CDO

How can you make a business case for a chief data officer (CDO)? Explain what they do:

- Assure regulatory compliance
- Manage and exploit information assets
- Apply data and analytics to drive both cost-optimization and revenue objectives
- Reduce uncertainty and risk

CDOs can help organizations gain competitive advantage over peers and manage data and analytics as principal assets.

Although an ideal data and analytics strategy utilizes all three, most companies use data and analytics as an enabler. There are no right or wrong choices — it depends on the organization. Establish the business value and match it with the core business strategy of the company for the best data and analytics approach. The most common options are:

- **Operational excellence** — Bring value through cost focus. Outsmart competitors with a superior grip on business processes.
- **Product innovation** — Seek value by creating the most desired products (or innovative business model) on the market. Margins are sustained by premium pricing for technologically advanced or fashionable products/services.
- **Customer intimacy** — Show superior knowledge about customers and the ability to move quickly despite not having the best or cheapest products. These offers are always well-fitted to the moment.
- **Risk management** — Create business value and differentiation by being able to mitigate risks in business that others can't.

13 Approaches to D&A Strategy

Core Business Strategy	D&A Approaches by Value Proposition		
	Utility	Enabler	Driver
Operational Excellence	1. Always on	2. D&A hub	3. Integrated value chain
Customer Intimacy	4. D&A as a service	5. 360-degree view	6. Personal analytics
Product Innovation	7. Self-service	8. Feedback	9. D&A products
Risk Management	10. Compliance	11. Risk mitigation	12. Risk leadership
13. Do nothing			

Source: Gartner

13 Approaches to D&A Strategy Breakdown

<p>1. Always on Uses data and analytics as an “always on” set of capabilities that doesn’t require a specific set of predefined business capabilities.</p>	<p>2. D&A hub Uses data and requires a measurable return for a business; generally centers around business cost, time and quality optimization.</p>	<p>3. Integrated value chain Creates a completely integrated information value chain, with data and analytics used throughout the chain.</p>
<p>4. D&A as a service Collects as much customer data as possible within legal boundaries to use for cross-selling, upselling and deep-selling.</p>	<p>5. 360-degree view Uses data to create a solid understanding of customer needs with context for better selling opportunities.</p>	<p>6. Personal analytics Shares data with customers that enables them to improve their lives versus for the benefit of the enterprise to create loyalty.</p>
<p>7. Self-service Uses data and analytics as a tool to support customers, enabling customer service to become self-service and the business to focus on innovation.</p>	<p>8. Feedback Uses data and analytics to enable new business models such as predictive asset maintenance.</p>	<p>9. D&A products Uses data and analytics to drive new business, making data a product in and of itself. Success is measured by the percentage of revenue attributed to data.</p>
<p>10. Compliance Aims to use data for compliance reporting and to minimize related costs.</p>	<p>11. Risk mitigation Uses data to mitigate risks and select business opportunities based on investment/return.</p>	<p>12. Risk leadership Uses data to more accurately assess risks versus companies not using data, enabling new business opportunities.</p>
<p>13. Do nothing (Not recommended) Fails to recognize the value of data and analytics, either unconsciously or as a purposeful business decision. This results in fragmented data and a generally undesirable state.</p>		

The key to success is to explicitly share the plan with stakeholders. There is a risk to assuming that everyone shares your view of whether data is a utility, an enabler or a driver. Data and analytics leaders must gain explicit agreement on the plan and create a strategy that works for the organization.

Data literacy

Data literacy is a growing challenge for most organizations. By 2020, 80% of organizations will initiate deliberate competency development in the field of data literacy, acknowledging their extreme deficiency.



Data literacy is

“the ability to read, write and communicate data in context, including an understanding of data sources and constructs, analytical methods and techniques applied, and the ability to describe the use-case application and resulting value.”

The challenge is that, in most organizations, business people might not understand the importance of how data and analytics supports their work, and similarly, data and analytics professionals might not have sufficient understanding of the business context of their work.

Data and analytics are increasingly valuable assets to organizations, which means that all employees need to be able to understand and utilize the information relevant to their role, at the moments that matter most. In a digital society, data is as important as the classic business drivers of “people, process and technology.” Information must become like a second language.



How can data and analytics leaders establish “information as a second language”?

First, establish a base vocabulary across the business beginning with key elements such as “value,” “information” and “analytics.” Then, identify areas of data literacy strength and where barriers are affecting communication.

For a proof of concept, select one of the areas of business that needs improvement but also demonstrates an openness to change.

Finally, change how you and your team communicate with the rest of the business. Set a good example by speaking data in meetings as it relates to business opportunities and value.

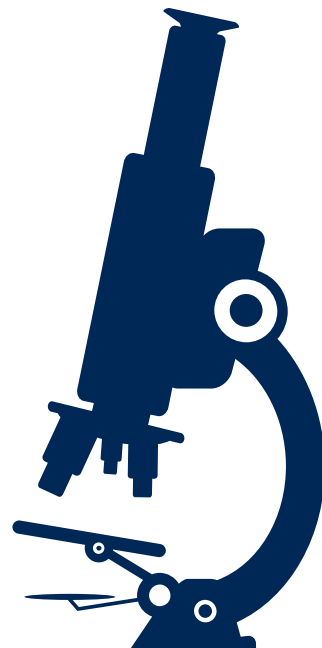


Data for good

The Community Technology Alliance (CTA), founded in 1991 to develop data-driven solutions to poverty and homelessness, is charged with coordinating data collection and cleansing.

This information is put into dashboards to help understand the needs of the homeless and to coordinate and provide care across multiple agencies.

In 2015, with support from the Tableau Foundation and Interworks, CTA launched a data fellows program to develop data leads tasked with using data to tell a story about homelessness in their cities.



Data and analytics governance

Data and analytics governance, or data governance for short, means managing data to ensure usability, availability, privacy, security quality and other factors that can greatly impact how valuable the data, analytics or algorithm is to the business.

Implement these 10 key factors to ensure successful data governance initiatives:

- 1.** Clearly identify the prioritized business outcomes for which you need to govern the associated data.

Clearly scope the data governance mandate and objectives based on these outcomes. Clarity of purpose will provide the focus for applying scarce resources to the most important governance activities.
- 2.** Apply varying degrees of governance policy (there are 8) depending on the data asset involved and outcome supported. Prioritize the highest level of rigor on the data assets with the highest impact or business value and broadest enterprise use.

- 3.** Tailor the stewardship model (for business users) to data-type characteristics. Analyze the characteristics of the data, such as business value and volume, to determine the appropriate data stewardship model.
- 4.** Establish clear procedures to guide project interaction with data governance bodies. Outlining that interaction to include timely knowledge exchange of project details ensures that data concerns are addressed consistently across projects and improves data solution quality.
- 5.** Involve the business in data stewardship roles and tasks. Data is a business asset and needs to be managed as such by business owners. Ensure business representation on stewardship boards.

- 6.** Target similar data users when initiating data standardization efforts. Identify cohorts of like-minded data users to establish consensus on data definitions and standards.
- 7.** Take an opportunistic approach to data standardization and standards — don't make this the focus. Pursue opportunities for data standardization and integration highlighted by events in the business environment, such as a merger or new senior executive, that would trigger new information requirements and needs.
- 8.** Formalize the promotion of master data management (MDM) and application data management (ADM) standards and principles. Use a structured forum with a well-defined scope to define and advocate for enterprisewide MDM and local or regional ADM implementation solutions and reuse.
- 9.** Prioritize data quality improvement based on the data's quality gap relative to its importance to the organization. Highlight data quality concerns from multiple user perspectives and in varying contexts to ensure the right data is targeted for quality improvement.
- 10.** Track progress toward data maturity goals. Define a specific set of maturity milestone indicators and monitor overall progress across data domains toward them.



Data quality and trust

Organizations are beginning to realize the financial impact that poor data quality and trust can have. In 2018, organizations estimated poor data quality alone cost them each an average of \$11.8 million per year.

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“Poor trust in data and data quality undermines digital initiatives and contributes to ineffective decision making, weakened competitive standing and customer distrust,” says Melody Chien, Senior Director Analyst, Gartner.

Through 2020, 80% of organizations will not reap the full benefits of their data quality investments because less than 20% of organizations will have formal data quality metrics in place.



Data for good

Mastercard shared anonymized data with New York University to check on the success of its redevelopment projects, smart city initiatives and programs to reduce greenhouse gases.

Organizations generally face three challenges when it comes to data quality:

- 1.** Nearly 57% of organizations fail to measure the annual cost of poor-quality data. They struggle to quantify the impact of poor quality and define exactly what is poor-quality data.
- 2.** Organizations that recognize the cost and impact of poor-quality data often find no clear way to fix the problem.
- 3.** Organizations spend an average of \$261,000 for on-premises tools, but only 23% utilize more cost-effective options such as cloud-based or hybrid-cloud-based deployment models. The cost of data quality tools remains a challenge.

To counter these challenges, organizations should create metrics that measure the value of high-quality data as well as the cost of low-quality data; position staff with data-quality skills across the business, including areas where low-quality data is costing money; and establish an effective data governance framework.



Additional research and articles

Why data? Why now?

[Build a Data-Driven Enterprise](#)

Mike Rollings, Andrew White (August 2018)

Focus on the strategy

[Start Your Data and Analytics Strategy With a Clear Value Proposition](#)

Frank Buytendijk, Saul Judah, Mike Rollings, Michael Moran (November 2018)

Data literacy

[Information as a Second Language: Enabling Data Literacy for Digital Society](#)

Valerie Logan (September 2018)

Data and analytics governance

[Data Governance Step-by-Step Guide](#)

CEB Research (Refreshed December 2018)

Data quality and trust

[How to Overcome the Top Four Data Quality Practice Challenges](#)

Melody Chien, Saul Judah (October 2018)

Sidebars:

[Use Data for Social Good](#)

Cindi Howson (August 2018)

[How to Use Data for Good to Impact Society](#)

Cindi Howson, Lydia Clougherty Jones, Carlie Idoine, Mark Beyer (June 2018)

[Write a Winning Business Case for a Chief Data Officer](#)

Debra Logan, Joe Bugajski (August 2018)

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