

Data Literacy Providers Will Accelerate the Time to Value for Data-Driven Enterprises

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Initiatives: [Data and Analytics Leaders](#)

Support from third parties can accelerate the success of data literacy training programs, offering new delivery models and platforms. Data and analytics leaders should select from a portfolio of commercial and academic providers both for their current expertise and emerging capabilities.

Overview

Impacts

- The need for enterprises to be more data-driven is driving business leaders to recognize the importance of developing a data-literate workforce.
- Working with providers of education, training and coaching for data literacy can accelerate the development of the data and analytics competencies needed for a flexible and resilient workforce.

Recommendations

As a data and analytics leader in charge of business strategy, you should:

- Work with the HR function to identify the level and type of data literacy required by various jobs/roles within your organization.
- Work with line-of-business leaders to map required skill levels to each job role (including updates to job descriptions and responsibilities where necessary).
- Work with third-party providers to plan data literacy programs that include deliberate training, coaching and awareness for data literacy skills across the workforce. Partner with your selected third parties to tailor such programs to suit specific line-of-business functions and roles (for example, marketing, sales, finance and frontline staff).
- Prepare the specific format and delivery methods for each area of study by using a combination of engagement methods. These could include self-learning reading; online computer-based training; informal lunch-and-learn sessions; classroom-based, on-the-job coaching; and formal certified education in partnership with a training provider or higher education institution.

Strategic Planning Assumptions

- By 2022, 90% of corporate strategies will explicitly mention information as a critical enterprise asset and analytics as an essential competency.
- By 2023, data literacy will become an explicit and necessary driver of business value, demonstrated by its formal inclusion in over 80% of data and analytics strategies and change management programs.

Analysis

Gartner defines *data literacy* as the ability to read, write and communicate data in context. This includes an understanding of the data sources and models, the analytical methods and techniques applied, and the ability to describe and effectively communicate the use cases, business application and resulting measurable value of a data-driven approach.

With the continued imperative for digital transformation and the need for businesses to create a digital workforce, we now see recognition of the role that data literacy plays within overall digital dexterity. Digital skills are critical, including an understanding of the application of sensors, robots, digital twins, mobile, cloud and seamless collaboration. The need to understand data and analytics is foundational to how everyone contributes to the success of their enterprise (see [“Build a Data-Driven Enterprise”](#)).

Figure 1 outlines the areas of impact and top recommendations for data and analytics leaders.

Figure 1: Impacts and Top Recommendations for Data and Analytics Leaders

Impact Appraisal for Data and Analytics Leaders

Impacts	Top Recommendations
The need for enterprises to be more data-driven is driving business leaders to recognize the importance of developing a data-literate workforce.	<ul style="list-style-type: none"> • Work with the HR function to identify the various jobs/roles within your organization and the level of data literacy that they require. • Work with line-of-business leaders to map required skill levels to each job role.
Working with providers of education, training and coaching for data literacy can accelerate the development of the data and analytics competencies needed for a flexible and resilient workforce.	<ul style="list-style-type: none"> • Work with third parties to plan data literacy programs that include deliberate training, coaching and awareness for data literacy skills across the workforce. • Prepare the specific modular format and delivery methods for each area of study using a combination of engagement methods.

Source: Gartner
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Impacts and Recommendations

Business Leaders Must Recognize the Importance of Developing a Data-Literate Workforce

Pioneer organizations in data literacy are emerging globally across all industry sectors as they realize its importance in driving business value. It has never been more important for leaders, creators and consumers of digital solutions to “speak data” in an accepted and shared way. Awareness of the need for data literacy as an organizational competency is on the rise, and leads to:

- Business leaders who understand the importance of creating a culture of sharing data and resources.
- Frontline associates who understand the fundamental value of entering good quality data, and the rules to follow for doing so (for example, sales staff, bank tellers and logistics coordinators).
- Employees who engage in self-service conversations with data to inform new insights and options (with the attendant changes in expectations and behaviors that are required to foster a more data-driven culture).

Competency areas for data literacy span a range of business-oriented and technically oriented themes, as shown in Figure 2.

Figure 2: Capability Areas for Data Literacy

Capability Areas for Data Literacy



Source: Gartner

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These data literacy capability areas include:

- **Data and analytics leadership** — Understand and communicate the business value of data and analytics, its vital role in digitalization, and how a business-aligned data and analytics strategy is crucial to drive organizational change.
- **Stakeholder engagement** — Learn how to tell compelling and impactful stories with data to improve decision makers’ confidence, increase influence and build long-lasting stakeholder relationships.

- **Managing data and analytics delivery** — Learn to deliver on new, innovative uses of data and analytics as well as the new and existing approaches to managing data and analytics programs.
- **Data and analytics organization** — As organizations strive toward being data-driven, understand the correct roles and competencies that generate information value.
- **Data and analytics governance and management** — Everyone from the boardroom to the mailroom has a role in the governance and curation of information assets. Ensure information remains protected, consistent and accurate in the context(s) that it is used.
- **Information security and privacy** — In an ever more information-oriented society, equip yourself with how to correctly enable and maintain information security and privacy.
- **Data management and architecture** — As the scale and pace of data creation intensify, as well as the need to harness data in real time, you must gain a core understanding of data management and architecture approaches.
- **Analytics and business intelligence (BI) methods and practices** — Learn the analytics, BI and data science methods driving digital transformation, radically improving customer experience and reshaping industries to identify new opportunities.

There are significant barriers to success with data and analytics. Respondents to the fifth Gartner Chief Data Officer Survey ¹ report that the top three internal roadblocks are:

1. Cultural resistance to accepting change
2. Lack of resources and funding to support the programs
3. Poor data literacy

To overcome these barriers and be successful, data and analytics leaders including CDOs must plan a change management program that includes contextualized and deliberate awareness, training and coaching for data literacy skills across the workforce. This change is not something that can simply be mandated by the CEO, or a “switch” that can be flipped — it requires a methodical, consistent and energetic leadership approach to achieve lasting and worthwhile change (see [“Culture Change Succeeds or Fails in Leadership Moments”](#)).

Recommendations:

- Work with the HR function to identify the various jobs/roles within your organization and the level and type of data literacy that they require.
- Work with line-of-business leaders to map required skill levels to each job role (including updates to job descriptions and responsibilities where necessary).

Work With Providers to Accelerate the Development of a Data-Literate Workforce

Although data literacy is a new and emerging field, multiple providers of education and training across the whole spectrum of data and analytics competencies already exist. These range from the deeply technical (e.g., data engineering, data management, data science) to highly business-oriented (e.g., domain expertise, process knowledge, business strategy and leadership).

The data literacy market is still forming, making an in-depth or exhaustive analysis of training providers premature. However, you may find the following illustrative selection of resources and providers helpful in identifying specific content and support that meets your needs:

- Online training portals and content:
 - [Avado](#)— Online data academy
 - [Coursera](#) — Modular selection of self-paced courses, which can be offered both as personal development and as certified credits
 - [Data Science Central](#) — Open community of and for data scientists
 - [Data Value Map](#) — Discursive template for building shared understanding around data initiatives
 - [edX](#) — Provider of massive open online courses (MOOCs), with content from leading universities; hosts online university-level courses in a wide range of disciplines to a worldwide student body, including some courses at no charge
 - [GitHub](#) — Selection of resources and community collaboration
 - [KDnuggets](#) — Site and resources for AI, analytics, big data, data mining, data science and machine learning
 - [Pluralsight](#) — Assessments, learning paths and courses authored by industry experts
 - [Skillsoft](#) — Provider of digital transformation courses that have been expanded to include data literacy, analytics and big data skills
 - [Udacity](#) — Technology-oriented online learning programs
 - [Udemy](#) — Covers a broad range of subjects, including business-oriented and technology topics
- Technology vendors, service providers and consultancy firms:
 - [Alteryx](#) — ADAPT program
 - [Ambient Intelligence](#) — Talent identification machine learning algorithm

- [Caserta](#) — Data and analytics strategy and consulting and delivery services, including data literacy and change management
- [Collibra University](#) — Training, learning paths and certification for data governance and intelligence
- [Data Literacy](#) — Online resources, self-paced online training and on-site training
- [Data Literacy Project](#) — Global community dedicated to creating a data-literate world; supported by organizations such as [Accenture](#), [The Chartered Institute of Marketing](#), [Cognizant](#), [Experian](#), [Qlik](#) and [Pluralsight](#)
- [Data to the People](#) — “Databilities” competency framework, assessments, benchmarks and capability development
- [Data-Pop Alliance](#) — Collaborative laboratory by the Harvard Humanitarian Initiative, MIT Media Lab and Overseas Development Institute that brings together researchers, experts, practitioners and activists
- [Gartner Consulting](#) — Advisory and solution services to design and deliver data literacy programs
- [Juice Analytics](#) — Founders wrote the book *Data Fluency: Empowering Your Organization With Effective Data Communication*
- [SAS](#) — Data and analytics solutions vendor supporting user enablement
- [Sparkline](#) — Digital analytics consultancy based in Singapore; offers a digital analyst curriculum and is the provider of a live three-month curriculum on behalf of Singapore’s Infocomm Media Development Authority
- [Tableau](#) — Data and analytics solutions vendor offering data literacy education and support
- [The Data Lodge](#) — Data literacy advisory services, boot camps and community
- [Theia](#) — Enterprise analytics hub vendor supporting data literacy enablement
- [Tuva for Enterprise](#) (and also for [K-12 education](#)) — Data literacy assessments and education
- Academic and public institutions’ offerings and content:
 - [Carnegie Math Pathways](#) — From the Carnegie Foundation for the Advancement of Teaching
 - [Data Foundation](#) — Nonprofit think tank based in Washington, D.C., that seeks to improve government and society by using data

- [“Data Literacy and Data Visualization”](#) — Ohio State University
- [“Data Literacy: A User’s Guide”](#) — D. Herzog
- [“Developing Data Literacy Programs: Working With Faculty, Graduate Students and Undergraduates”](#) — Bulletin of the Association for Information Science and Technology
- [“Developing Data Literate Students”](#) — University of Georgia
- [“Strategies and Best Practices for Data Literacy Education”](#) — Dalhousie University
- [University College Cork/Irish Management Institute](#) — Offers a Masters of Science degree in data business
- Additionally, this [moderated list of higher education courses and programs](#)

Recommendations:

- Work with third-party providers to plan data literacy programs that include deliberate training, coaching and awareness for data literacy skills across the workforce. Partner with your selected third parties to tailor such programs to suit specific line-of-business functions and roles (for example, marketing, sales, finance and frontline staff).
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Evidence

¹ [“Survey Analysis: Fifth Annual CDO Survey — Growth Must Continue in Order to Achieve Real Impact.”](#) Gartner’s 2019 Chief Data Officer Survey was conducted to explore the business impact of the CDO role and/or the office of the CDO. The research was conducted online from September through November 2019 among 293 respondents from across the world. Respondents were required to have the title of CDO or CAO, or to have the responsibilities of an executive-level data and analytics leader in their organization (in the case of organizations without an official C-level D&A title). The survey sample was gleaned 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 data and analytics leaders. The study was developed collaboratively by Gartner D&A analysts and the Primary Research Team. (Note: Results of this study do not represent global findings or the market as a whole but reflect sentiment of the respondents and companies surveyed.)

Recommended by the Authors

[How Chief Data Officers Show Leadership in Improving Data Literacy and Fostering a Data-Driven Culture](#)

[10 Ways CDOs Can Succeed in Forging a Data-Driven Organization](#)

[How to Design an Effective Training Program for Analytics Skills](#)

[Toolkit: Curriculum for Data Literacy Training Programs](#)

[Toolkit: Data Literacy Organizational Assessment](#)

[Toolkit: Data Literacy Individual Assessment](#)

[Data-Centric Facilitators Are Crucial for Enabling Data Literacy in Digital Business](#)

[How CDOs Engage With Their Stakeholders to Foster Data Literacy and Deliver Measurable Business Value](#)

[How Chief Data Officers Can Scale the Value of Data and Analytics by Working With External Service Providers](#)

[How to Foster a Data-Driven Culture and Stakeholder Relationships That Last](#)

Recommended For You

[Tool: Communicating the Need for Data Literacy Improvement](#)

[Toolkit: Data Literacy Individual Assessment](#)

[Tool: Enable Data Literacy Through Stakeholder Analysis and Linking to Business Outcomes](#)

[Data and Analytics Value Creation: Key Obstacles and How to Overcome Them](#)

[Toolkit: Curriculum for Data Literacy Training Programs](#)

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