

# Make Data Literacy the Foundation of Your Data Culture

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## Introduction

In numerous ways, digital transformation outpaced the formal and continuing education of a significant percentage of workforce professionals. For example, when PCs matured sufficiently to become a workplace standard, they did so long after the end of the formal education received by professionals now in their mid-50s or older. In proactive organizations, most of these people received necessary supplementary training that enabled them to be efficient and effective within this new paradigm. In reactive organizations, many of these people delivered a period of reduced productivity while they learned new skills on the job in real time.

Also fueled by digital transformation, the pace and volume of data available for analysis continues to accelerate and expand rapidly. However, data are only as valuable as the insights that an organization can gain from them. And, similar to the case for PC literacy, an even larger percentage of the adult workforce received no or minimal educational training on how to work with, manipulate, analyze, and visualize data—what is known as data literacy. Yet, every day, many organizations seem content to let a large portion of their professional workforces “try their best” when it comes to understanding and using data, and leveraging that information to make crucial data-driven business decisions.

Data literacy needs to rise to the level of human-language literacy and become part of the cultural fabric of organizations. Yet, many individuals in today’s workforce are not at such a level, having never received proper training—if any—in data-literacy concepts. For many years, it was common for even advanced-degree programs not to provide data-literacy training beyond a basic statistics class. That makes the need for ongoing data-literacy programs a critical, strategic imperative for data leaders as well as executive management.

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Data literacy is not simply a set of training classes one “gets through.” It represents a prerequisite for organizations to operate at advanced levels of data and analytics maturity (see the Research Insight “Introducing the Hyper-Decisive<sup>®</sup> Maturity Model”). Despite having an educational component, data literacy also helps build the foundation of an organizational culture that values data and fact-based decision-making.

Our data show significant business benefits associated with higher levels of data literacy and data-literacy programs. Organizations with higher data-literacy rates report greater success with their BI initiatives, greater frequency of data-driven decision-making, and an easier ability to find analytic content. Higher levels of data literacy also correlate with better communication and collaboration, and valuing data- and fact-based decision-making. And, not surprisingly, the presence of formal data-literacy programs correlates with higher levels of data literacy within organizations.

Data leaders (such as a chief data officer—CDO) or de-facto data-leadership functions (such as a BI Competency Center—BICC) need to own and drive data-literacy programs in their organizations and make data literacy a part of the organizational data culture—even if executive management does not (yet) recognize it as a priority. It is strategic—and the business reasons for it are compelling.

Organizations looking to improve the success of their BI initiatives and expand the use of BI and analytics should consider investments in programs aimed at improving data-literacy levels. The likely resulting improvements in BI initiative effectiveness, more frequent data-driven decision-making, and easier access to finding and leveraging analytic content will help increase business returns received from BI investments.

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## Executive Summary

1. Organizations with the highest levels of data literacy also report most frequently making data-driven decisions all the time.
2. Organizations with the highest level of achievement with their BI initiatives also have the highest levels of data literacy.
3. In organizations with high and extremely high levels of data literacy, availability of data-literacy education contributes to their BI success three times more often than it does in organizations with moderate, low, and very low data literacy.
4. Organizations with the highest rates of data literacy also report the highest levels of BI penetration, while those with the lowest rates of data literacy also report the lowest levels of BI penetration.
5. Organizations with the highest levels of data literacy also report having the most data-literacy programs in place.
6. The presence of formal data leadership within an organization significantly increases the likelihood for support of a data-literacy program.

## Recommendations

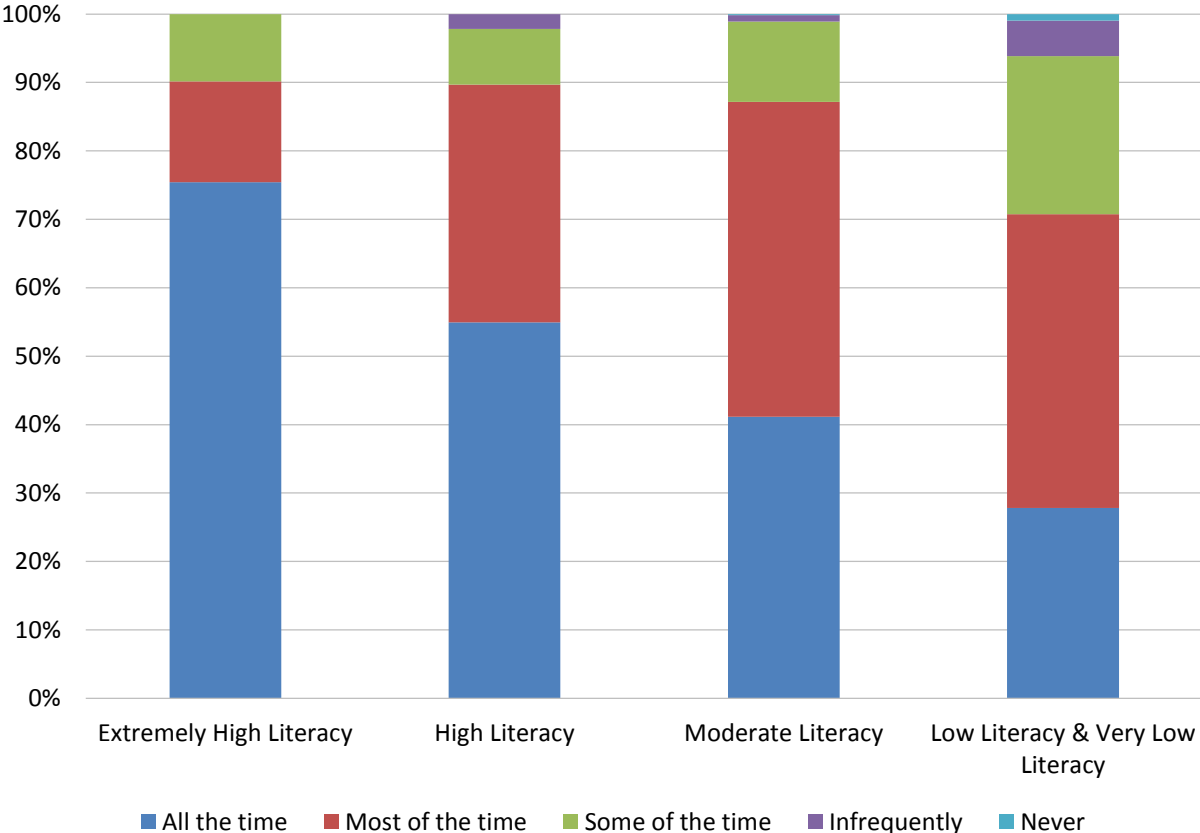
1. Organizations aiming to improve the success of their BI initiatives and expand the use of BI and analytics should consider investments in programs aimed at improving data-literacy levels. The resulting likely improvements in effectiveness of BI initiatives, more frequent data-driven decision-making, and easier access to finding and leveraging analytic content will help increase business returns received from BI investments.
2. A data-literacy program should begin by assessing data-literacy levels within the organization. This benchmark will enable a proper determination of investment and programs to increase data-literacy levels. Regular reassessments of these levels will enable organizations to gauge progress over time, and can guide any potential changes to investments and programs.
3. Organizations with data-leadership functions—such as a chief data officer (CDO) or BI Competency Center (BICC)—should leverage these resources to own and assist with data-literacy programs.
4. Where an appropriate and justified business need exists, support ongoing data literacy and a data culture by providing additional access to BI and analytical solutions, and encouraging their collaborative use as part of all decision-making and reporting processes.

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## Higher Data-Literacy Levels Result in More Data-Driven Decisions

As data-driven decision-making becomes increasingly critical to organizations, so does the need for increased levels of data literacy. Our data show that 75 percent of organizations with extremely high levels of data literacy make data-driven decisions all the time. In stark contrast, only 41 percent of organizations with moderate levels of data literacy make data-driven decisions all the time.

### Data-Driven Decision-Making by Data Literacy



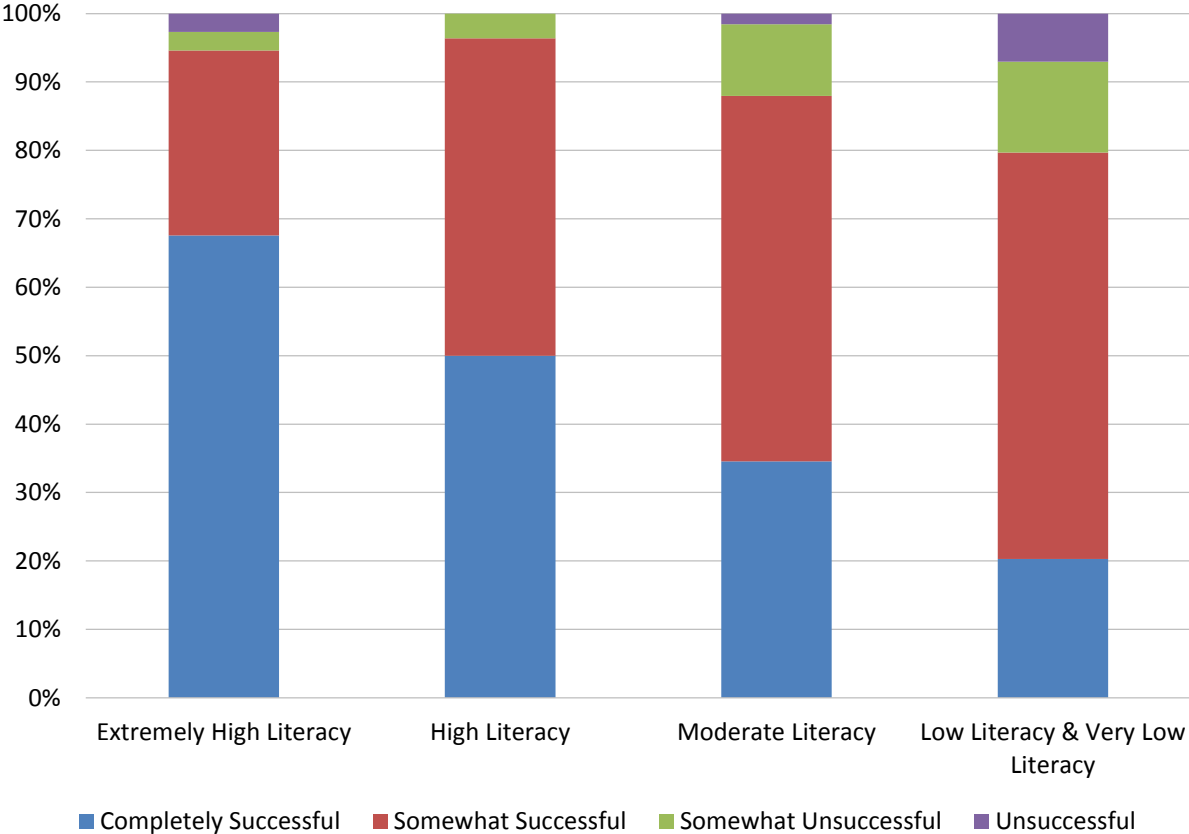
Source: Dresner Advisory Services

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## Data Literacy Is Critical for Organizations Seeking BI Success

Organizations that report the highest level of achievement with their BI initiatives—considering them completely successful—also have the highest levels of data literacy. Users with higher levels of data literacy can interact better with and rely more confidently on the BI solutions they use and draw better insights from data. Although at least 80 percent of organizations consider their BI initiatives either completely successful or successful, higher levels of data literacy are key to achieving the highest levels of BI success.

### BI Success by Data Literacy



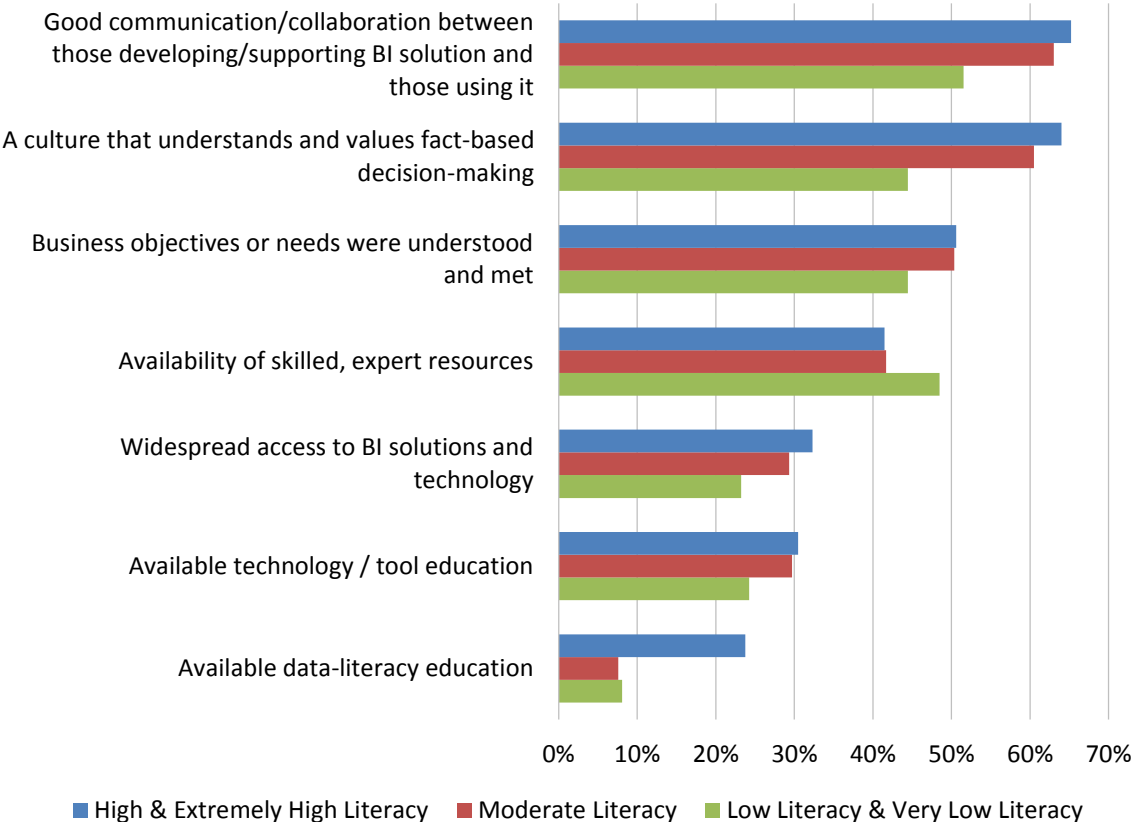
Source: Dresner Advisory Services

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## Data Literacy and BI Success Factors

We track many factors contributing to BI success. These include good communication and collaboration between those supporting the BI solution and those using it; a culture that understands and values fact-based decision-making; business objectives or needs being understood and met; availability of skilled, expert resources; widespread access to BI solutions and technology; available technology/tool education; and available data-literacy education. In almost every area, higher levels of data literacy correlate with higher perceptions of BI success factors.

### BI Success Factors by Data Literacy



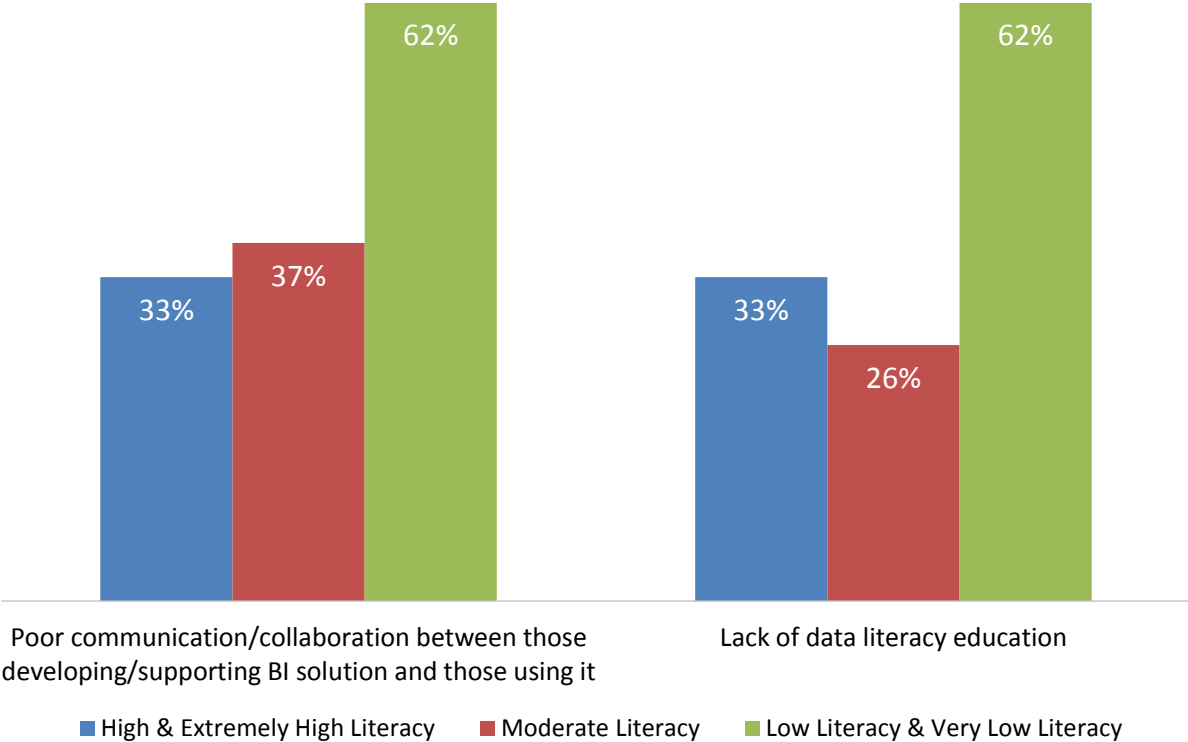
Source: Dresner Advisory Services

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Communication/collaboration between those developing/supporting a BI solution and those using it represents both a top factor of BI success for those with high and extremely high levels of data literacy, as well as the top obstacle for organizations that report low and very low levels of data literacy.

Organizations with high and extremely high levels of data literacy report that availability of data-literacy education contributes to their success three times more often than organizations with moderate, low, and very low data-literacy levels. Likewise, organizations with low and very low levels of data literacy report lack of data-literacy education as an obstacle to BI success more than twice as frequently as organizations with higher levels of data literacy.

## Obstacles to BI by Data Literacy



Source: Dresner Advisory Services

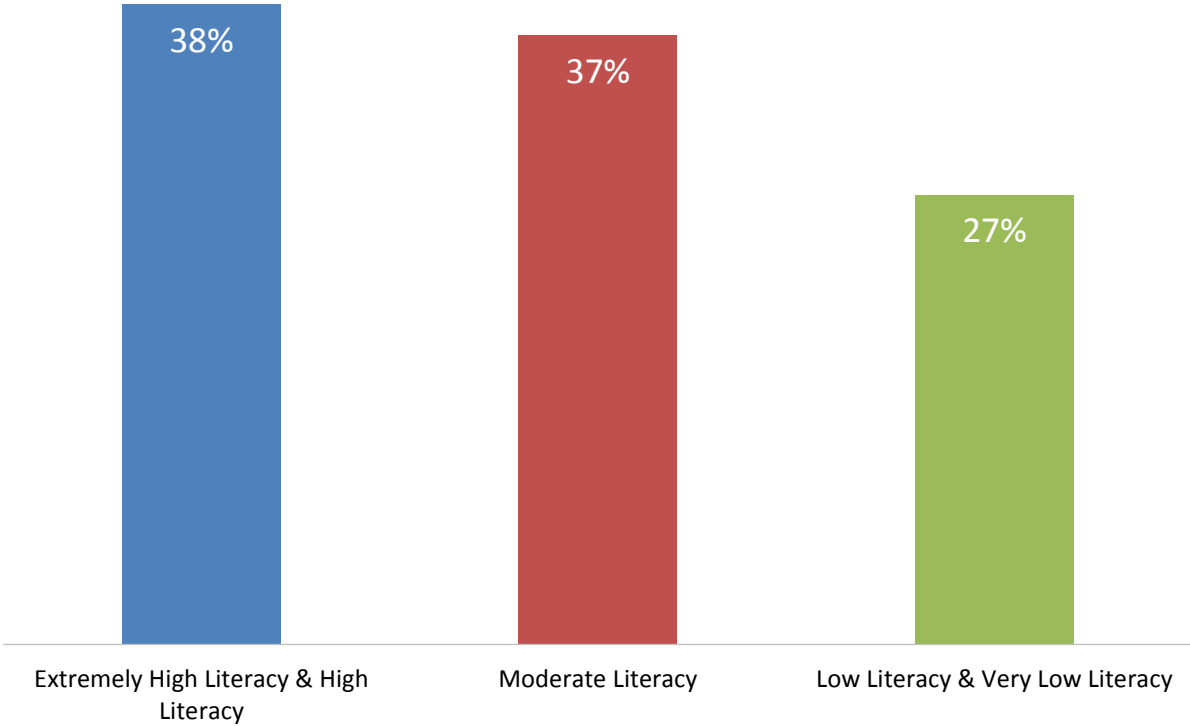
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## Provide Access to BI Solutions

Increased access and exposure to BI tools and solutions associates positively with higher rates of data literacy. Organizations with the highest rates of data literacy also report the highest levels of BI penetration, while those with the lowest rates of data literacy also report the lowest levels of BI penetration.

### Average BI Penetration by Data Literacy



Source: Dresner Advisory Services

In addition, organizations that consider their BI initiatives completely successful have an average of 41 percent of employees with current access to BI solutions and plan to continue to increase those levels during the next three years.

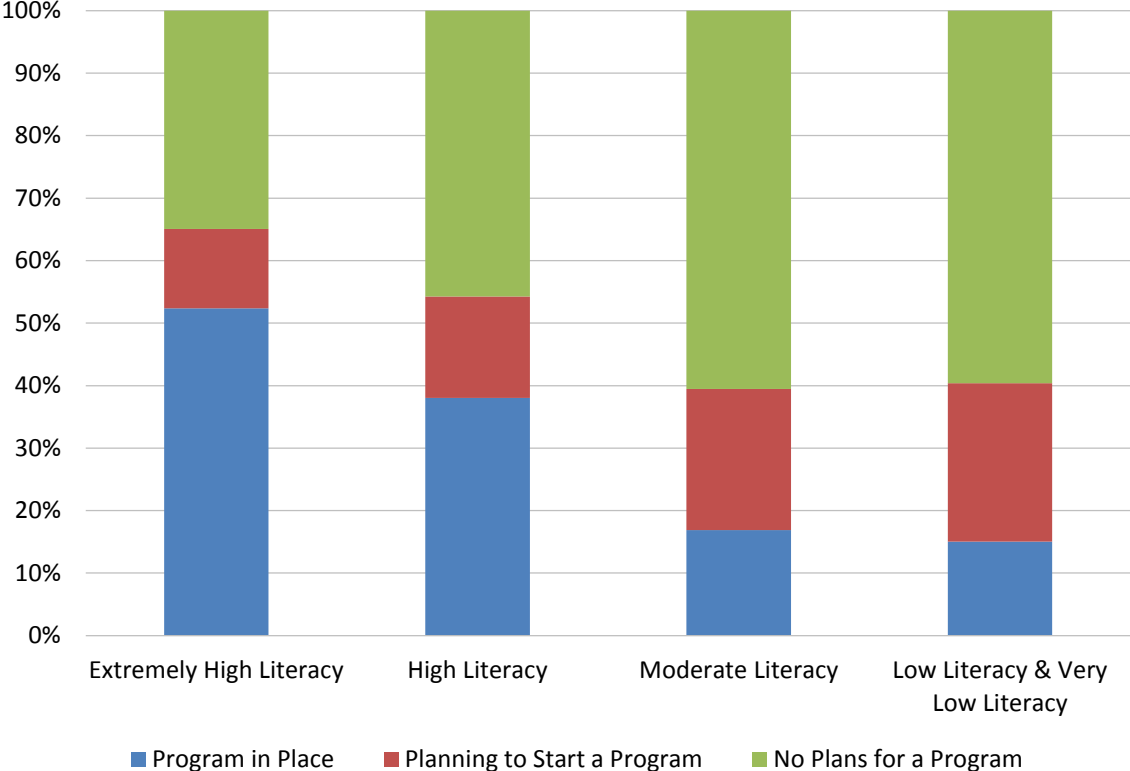


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## Implement Data Literacy Programs

Organizations with the highest levels of data literacy also report having the most data literacy programs in place.

### Data-Literacy Programs by Data-Literacy Levels



Source: Dresner Advisory Services

Programs can be formal and informal, but a mix of the two styles may make the most impact. Successful data-literacy programs include information about broad high-level data topics, specific data sources within an organization, and the skills needed to use the BI tools. Programs can include formal in-person training, self-paced e-learning training modules, in-person and virtual lunchtime sharing sessions, and informal training from a BICC. All these program efforts connect employees to the BI specialists within an organization and can familiarize them with resources to reference if they have questions in the future.

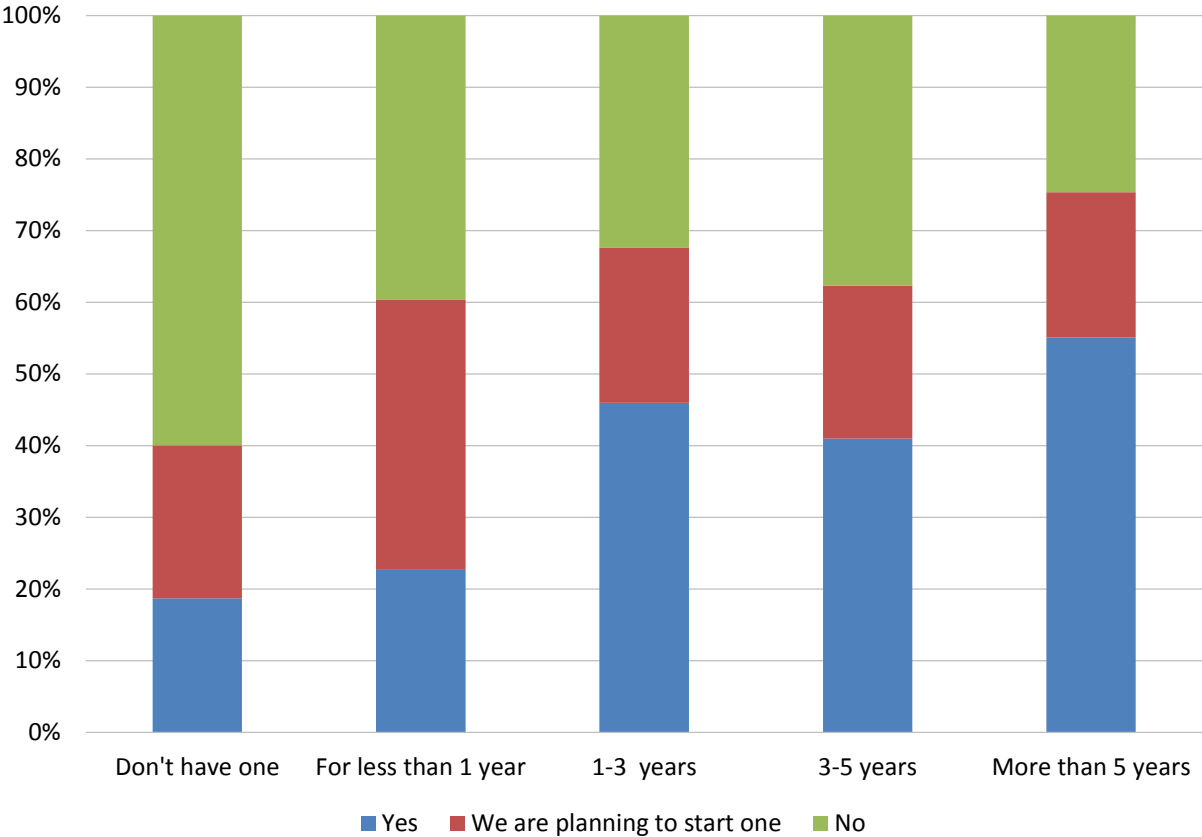
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## Data Leadership Presence and Tenure Associates Strongly With More Data-Literacy Programs

The presence of formal data leadership within an organization (such as CDO or CAO) significantly increases the likelihood for support of a data-literacy program and BI initiatives overall. Where formal data leadership (a CAO or CDO) has been in place for at least one year, 46 percent of organizations report having data-literacy programs in place—significantly higher than the 19 percent reported by organizations without formal data leadership.

Furthermore, program levels (in place and planned) rise steadily and consistently with the tenure of a formal data leader, indicating that data-literacy programs represent an important, ongoing part of reinforcing a data culture in an organization.

### Data-Literacy Programs by Data Leadership



Source: Dresner Advisory Services