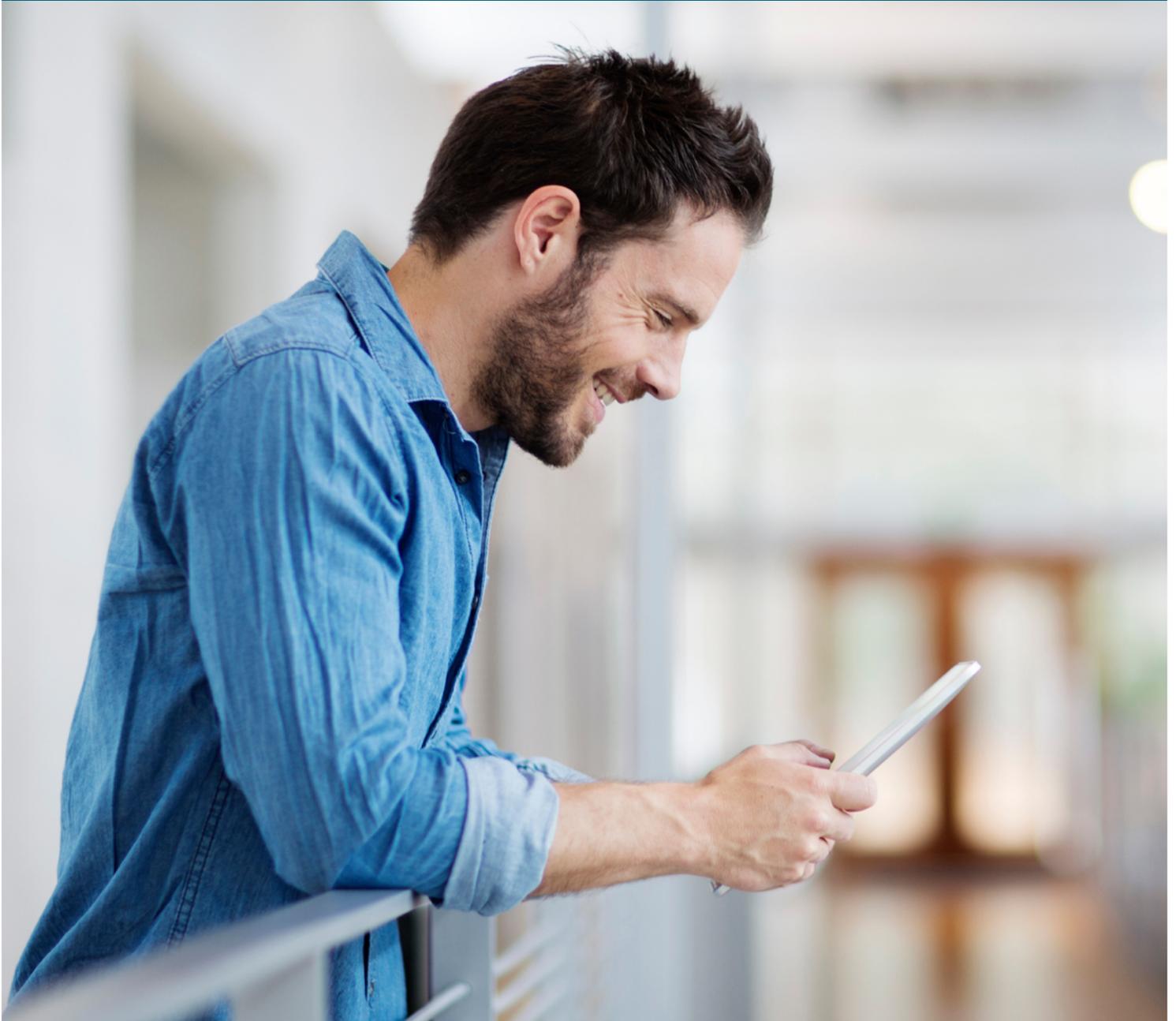


The Data Literacy Index

The \$500m Enterprise Value Opportunity

Results Summary



Foreword

In every industry across the globe there has been an explosion in the data available for decision making. Yet for too long, so much of the value held within data has been left out of the hands of those who can derive meaning from it.

Automation, robotics and artificial intelligence are creating fundamental changes in how we live and work. And data is the universal language of this fourth industrial revolution.

We need a workforce that can ask questions of machines and use data to build knowledge, make decisions and communicate its meaning with others.

The ability to translate data into useable information that inspires action still eludes many of us: widespread data skills do not exist across today's workforce, data is not democratized, and data-driven decision-making is neither incentivized nor encouraged.

Why? There remains a persistent gap between how organizations perceive the importance and relevance of data, and the appreciation for what's become known as data literacy – the ability of an organization to read, analyze, use for decisions and communicate data and insights throughout their organization.

It's this burning challenge for many organizations to effectively harness the huge data opportunity that sparked us to commission a much-needed study into corporate data literacy.

The Data Literacy Index is the result of an investigation that aims to explore the relationship between data literacy and the value a business can derive from it. For the first time, we revealed the correlation between company performance and workforce data literacy and established a measure that organizations can benchmark themselves against.

The Data Literacy Index is not just intended to be an interesting analysis of the current state of affairs. It is a call to arms to business leaders to defend their market share and ensure the data revolution does not leave them in its wake.

Read on to find out how your organization could enjoy up to \$500m in higher enterprise value with data literacy and what global business decision makers feel about the data literacy opportunity.

The Data Literacy Index was commissioned by Qlik on behalf of the Data Literacy Project. The research and analysis were conducted by IHS Markit, PSB Research and academics from the Wharton School, University of Pennsylvania.



Mike Capone
CEO, Qlik

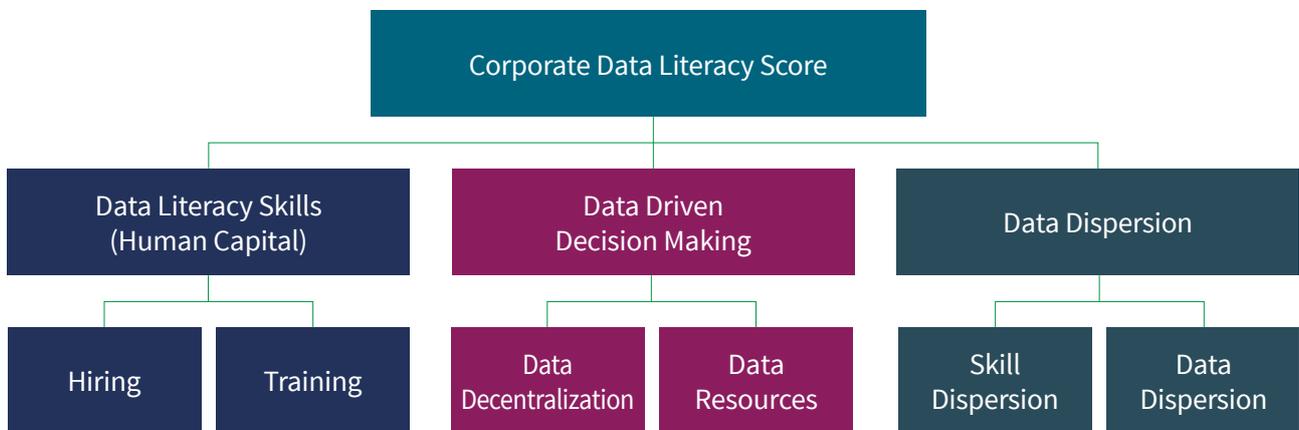
Defining ‘Corporate’ Data Literacy

The term data literacy has typically been applied when referring to individuals. It does not demand a highly technical understanding of data, which might be required of a data scientist or analyst, but measures a person’s ability to read, work with, analyze and argue with data.

To the same end, Corporate Data Literacy is not limited to scientific or technical organizations or simply achieved through hiring data specialists. We established the first definition for Corporate Data Literacy as the ability of an organization to read, analyze, utilize for decisions, argue with and communicate data throughout the organization.

When determining what this looks like across an organization, we identified three core pillars of data literacy.

THE PILLARS OF CORPORATE DATA LITERACY



Source: IHS Markit

Data Literacy Skills

Data literate organizations require employees who are themselves data literate. While most organizations obtain data skills through hires, education programmes are also needed to help everyone understand and use data in their role.

Data Driven Decision Making

Data driven decision making is measured by two different aspects: Data Decentralization, so individuals have access to the necessary data they need to make decisions in their role; and Data Resources, which ensures insights are captured and presented in a way that supports data-driven decision making.

Data Dispersion

Data skills dispersion measures how widespread the use of data is throughout the organization, as every department, beyond clusters of specialist functions, must be able to derive insight and act on it.

ESTABLISHING CORPORATE DATA LITERACY SCORES

Using this definition, IHS Markit and Wharton academics have developed a new measurement system – Corporate Data Literacy (CDL) Scores – based on the performance of an organization against the three dimensions of corporate data literacy: the data skills of the employees (human capital); data driven decision making; and data skill dispersion (how widespread is the use of data throughout the organization). For the global sample, the distribution of CDL scores range from a low of 0 to a high of 100.

The Data Literacy Index: Revealing the \$500 million opportunity

When engaged with properly, we know data is a critical asset for an organization to stay competitive. Yet, a significant empirical effort to quantify the impact of data literacy on financial performance was missing.

With The Data Literacy Index, we address this. It is a rigorous model that ranks companies against Corporate Data Literacy scores and attempts to correlate literacy levels to measures of corporate performance.

The findings were startling. The Data Literacy Index discovered:

- Workforce data literacy has a proven correlation with corporate performance. Organizations ranked in the top third of the Data Literacy Index are associated with three to five percent greater enterprise value (market capitalization)
- Based on the average organization size of this study (\$10.7b enterprise value), enterprises that have higher corporate data literacy scores can have \$320-\$534 million in higher enterprise value
- Improved corporate data literacy positively impacts other measures of corporate performance as well, including gross margin, Return-on-Assets, Return-on-Equity and Return-on-Sales

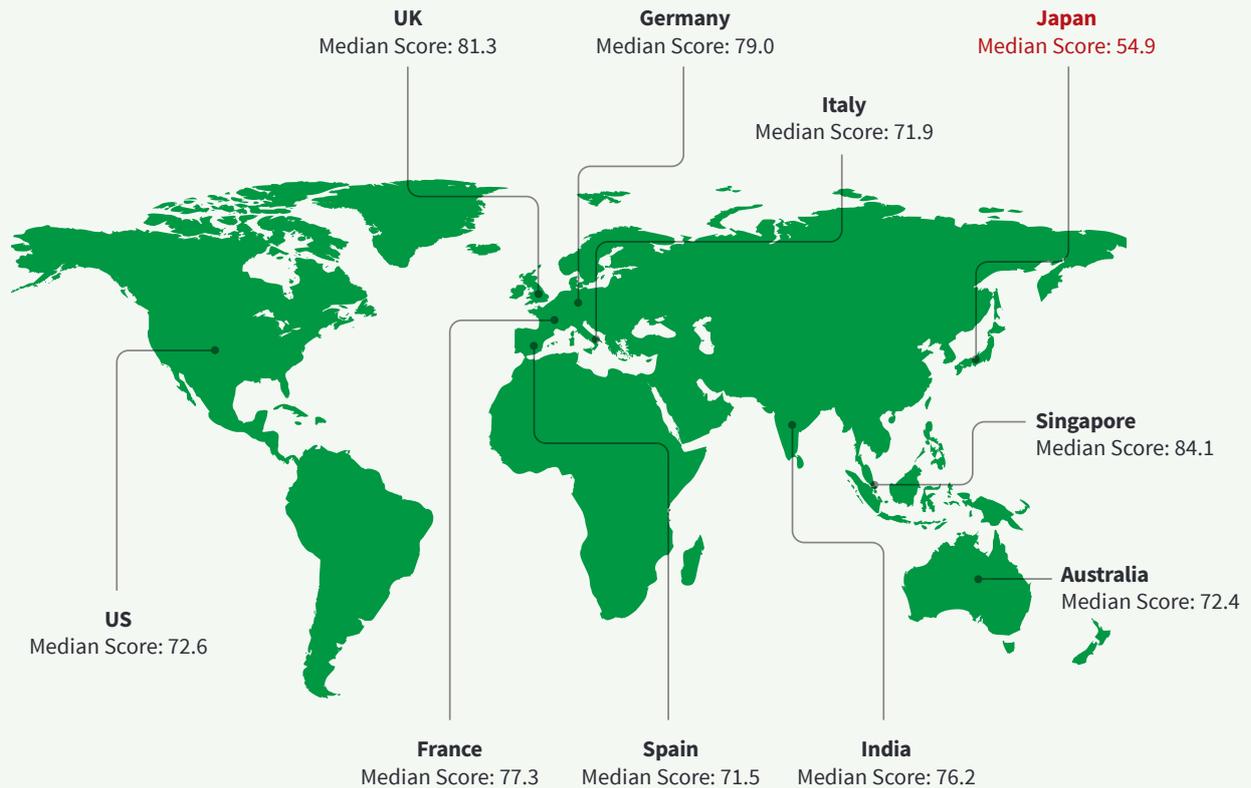
THE GLOBAL PICTURE

While the positive relationship between Corporate Data Literacy and corporate performance is consistent across every region and industry analyzed, the breakdown provides a clear benchmark for business leaders.

Regional excellence

- Europe holds the highest Data Literacy score globally, with the UK, Germany and France among the most mature nations for corporate Data Literacy
- This reflects a greater recognition that European business decision makers have for the value of data. 72 percent affirm that it is “very important”, compared with just 60 percent in Asia and 52 percent in the US. It also appears to positively impact the proportion of decisions that are made using data and encouragement for employees to become comfortable with data
- The Data Literacy scores for the US and APAC regions were slightly lower, but were not statistically different from each other
- Singapore performed exceptionally for its region and is the most data literate nation globally
- The US is experiencing a different situation, with nearly half of business leaders reporting that at least “quite a few” changes have been made to their companies’ use of data – the highest of all regions. However, organizational changes are not matched by investment US business leaders report lowest levels of both data literacy training (30%) and only 16% report that their companies “significantly encourage” employees to become more comfortable with data.

Regional excellence



Source: IHS Markit

Industry leaders

There are far greater differences in corporate data literacy between different industries than between regions.

Median CDL Score by Industry



Source: IHS Markit

Where are Enterprises falling short when it comes to Data Literacy?

While there are regional and industry differences in the understanding, adoption of and investment in data literacy, the survey of global business decision makers used to inform The Data Literacy Index has identified areas that may be holding organizations back from effectively harnessing the data opportunity.

HAVING DATA VS. UNDERSTANDING IT

There is a gap between the importance that companies put on data, and their appreciation for it to drive business and economic outcomes: 93 percent of business decision makers believe that data literacy is relevant to their industry and it is important for employees to be data literate, yet less than a third see data literacy as an important factor in a successful economy.

THE VALUE OF DATA SKILLS

Companies recognize they need more data skills, with 63 percent of large businesses planning on increasing the number of data literacy employees. However, there is a significant skills gap, with just 24 percent of the global workforce fully confident in their ability to read, work with, analyze and argue with data.

Despite 78 percent of the global workforce being willing to invest more time and energy into improving their data skill set, just 34 percent of firms currently provide data literacy training and just 17 percent “significantly encourage” employees to become more comfortable with data. Companies also aren’t incentivizing upskilling, with only 36 percent of business leaders willing to pay higher salaries to employees who are data literate.

THE DATA GAP IN DECISION MAKING

Nearly all business leaders acknowledge that data is important to their industry and in how their company currently makes decisions. But shockingly, just eight percent of firms have made major changes in the way the data is used over the past five years.

In fact, data driven decision making has the lowest score of the three dimensions of Corporate Data Literacy measured. So, even companies that have data literate employees across every business unit are not likely to be turning data into useable information as effectively as they could.

DATA TECHNOLOGIES GO HAND-IN-HAND

While not included in the measure of Corporate Data Literacy, our research has revealed that certain technologies - such as business intelligence, advanced analytics and visualization - also have a positive effect on corporate performance.

Unprecedented amounts of data are now being created by the Internet of Things including sensors, edge devices and more powerful computing. Data technologies simplify data, enabling employees to analyze and interpret it more quickly. However, a tool is only as effective as whoever uses it. Companies need a workforce that know how to input data, generate better insights, and are empowered to use it to inform decision making.

What's next?

In a world increasingly powered by data, data literacy is as important as literacy itself. Organizations that want to stay competitive in a data rich world must prepare themselves to take advantage of every opportunity for it to inform their business practices and decisions.

However, as the value of data literacy is not currently seen in the context of the wider economy, many businesses are not making the necessary changes to their workforce, resources or processes. The Data Literacy Index now helps show the importance of Corporate Data Literacy for company performance.

To help organizations navigate their data literacy journey, we are committed to:

- Working with global industry leaders from The Data Literacy Project to compile a comprehensive report that provides organizations with expert perspectives, content and a definitive approach to improving Corporate Data Literacy
- Developing an online tool that will allow organizations to discover their own Corporate Data Literacy score, against which companies can benchmark themselves

