Enabling Data Science to Speak the Language of the Business

Delivering value to the C-suite

Abstract: In today's business environment, data is a vital asset. It can be leveraged to deliver insights into customers, assess opportunities, and drive operational excellence across all business processes. However, there is a communications gap between those who are generating insights (data scientists) and the business consuming them. The data science role may be placed two or three levels down within the technology group. The net effect is frustration for business partners and lost opportunities, as business leaders do not benefit from data-driven decision making. According to our research, world-class companies are two times more likely to have a formal enterprise data and analytics roadmap. Data must be not only accessible but actionable for the business to derive the most value and mitigate risk. This can be achieved by transforming the data science life cycle from ideation to consumption as well as placing the data science practice on the business side.

Six key elements to successfully leveraging data for the business:

1. Transform the value of data scientists through business-oriented training.
2. Enable data teams to speak a language that the business understands by leveraging a business-friendly data science insight taxonomy.
3. Create a culture that supports the organization's data-driven strategy.
4. Build a talent strategy that supports the cultural change.
5. Bolster training and upskilling with organizational changes.
6. Develop an implementation roadmap that is tactical and realistic.

> The ever-growing amount of available data combined with effective data analysis has produced a compelling catalyst for change. However, the ultimate goal of a data-driven culture can only be achieved when data scientists embrace the language of business.
>
> **Yonas Yohannes – Principle, The Hackett Group**

Partnering with companies that offer business-oriented data training can enable leaders to derive the maximum value from their data science practice. The right training can elevate the knowledge of business executives and their teams, break down siloes, and bridge communication gaps as they create a data-driven culture.

Introduction

Section 1

In today's fast-paced business environment, having the right data at your fingertips is crucial. Our research shows that advanced analytics deployments fail to meet expectations in most companies, yet they are expected to increase more than any other digital tool in recent years. An IT organization must step up as an analytics partner to the business by educating stakeholders and shaping expectations. Many also aim to clarify responsibility for delivery of data and analytics services through improvements to governance. Additionally, business stakeholders (who may or may not be data-fluent) treat data like a service shop rather than engaging data scientists early on to give insight on framing problems and projects. There's value left on the table when data is treated as tactical, not strategic.

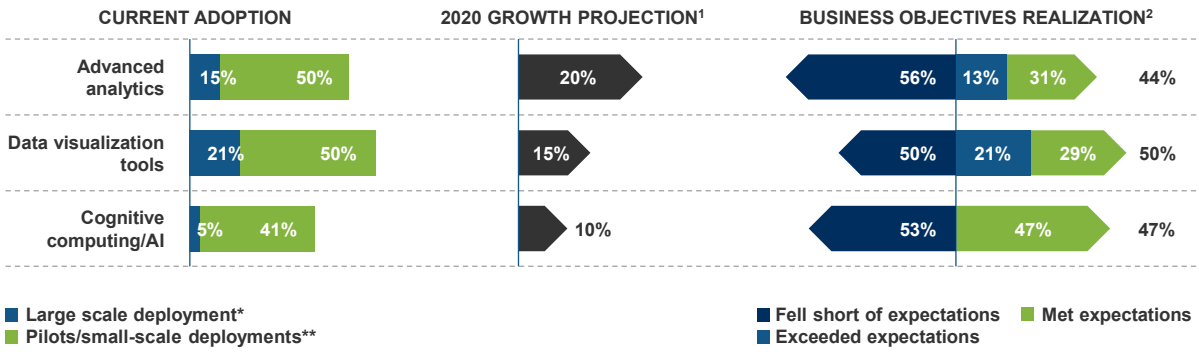
How did we get here? First, industry hype inflates expectations, which pilot programs are unlikely to fulfill. Business leaders must realize there is more to achieving analytics breakthroughs than simply procuring and installing tools. In addition, companies may lack talent with the required skills, and some of the tools themselves are immature. Most significantly, issues with inaccessibility and inaccuracy curtail achievements from unlocking data's value. These problems are amplified when the business culture is indifferent or resistant to using data in decision making. To drive the value of data, business stakeholders and data practitioners must change their methods of communicating and engaging.

In companies that achieve better outcomes, an education process often begins organically with data champions and becomes more formal over time. IT partners convey to stakeholders what analytics can and cannot do, teach them how to ask the right questions, and remind them that outcomes are only as good as the data being analyzed and that this transformation will be more difficult than first imagined . In some cases, the CEO hires data leaders so they don't have to learn data science.

IT leaders and business intelligence officers at companies with disappointing outcomes say their executives are often biased against analytics and skeptical that the tools can do a better job of predicting outcomes and prescribing actions than a veteran of the business. It's not a good place to be in: When results contradict expectations, the outputs are dismissed as unreliable. Usually, the problem is traceable to a top-down mandate to implement advanced analytics without corresponding attention to training, expectation setting, or understanding success factors.

Data practitioners need to proactively step up to reach their leadership—a heavy lift—not meet them halfway. They must evangelize to 99% of the business, while the C-suite only needs 1% of the data literacy.

Adoption of data technologies, projected growth, and objectives realization



*The technology is used on a limited scale in isolated use cases **The technology is used at scale in applicable use cases
1 Year-on-year percentage change in applicable adoption metric for each technology
2 E.g., ROI, payback, cycle-time improvement, quality of service improvement, customer experience improvement

Source: Key Issues Study, The Hackett Group, 2020

[1] Year-on-year percentage change in applicable adoption metric for each technology.

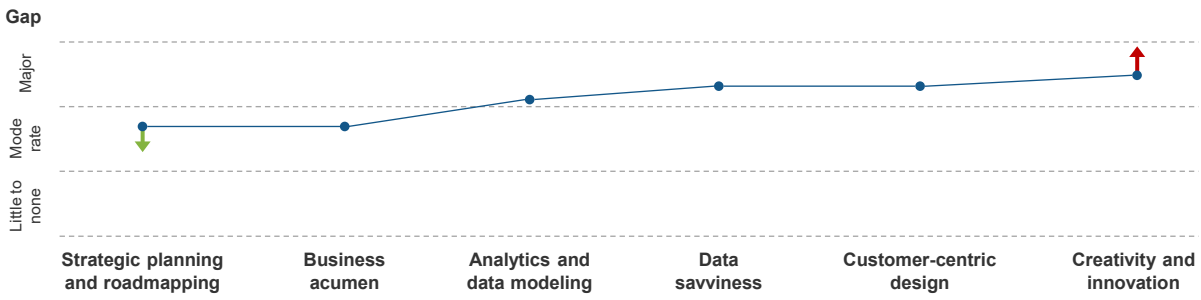
Understanding the value of data is critical to leveraging the world's most valuable commodity. Forbes has coined it "the ultimate renewable resource.“ However, getting to a point of mutual agreement between technology organizations and business leaders doesn’t just involve chatting over a cup of coffee. It takes a cultural shift to make data science more business-centric.

“Organizations reap immense benefits from aligning the data team’s goals with those of the overall business,” says Pragmatic Institute CEO Philip Alexander. “Bridging any gaps and boosting data and business fluency across the organization is the key to delivering value for the bottom line.” To successfully bridge that data translation gap, companies need skilled practitioners. They need data personnel who are good at listening, deciphering, and translating data-speak into business value.

While companies are adopting advanced analytics, data visualization solutions, and cognitive computing, our key issues study shows that more than half the time business objectives are not met. Misalignment and miscommunication of data team and business objectives are some of the more impactful contributing factors to this failure to meet business objectives. Identifying the pitfalls in implementing data capabilities will be key as more companies begin to adopt data technologies.

Data practitioners often don't have enough context or clarity around the business and its needs to hit the ground running on requests, and onboarding delays threaten productivity. Some new data scientists just don't have the right skills. As we found in our key issues study from 2020, the weakest skills within technology organizations are data savviness, customer-centric design, and creativity and innovation. Successful data teams need practitioners with these talents to generate findings that drive the business.

Current IT skill gaps and top projections for 2020 change



Source: Key Issues Study, The Hackett Group, 2020

Current gap

Largest predicted gap increase/decrease in 2020

There is a vast organizational need for not just data, but data fluency. Most C-level execs want their data analysts to be good partners to their stakeholders—not succumb to office politics or get bogged down in nonsensical requests—and that requires communication and interpersonal skills not taught in school.

Importance to technology organizations and business leaders | Section 2

Enabling business leaders to understand the value that can be extracted from data insights and take action using evidence is crucial. However, this requires technology and business leaders alike to reach a point of mutual understanding of what data can provide. For example, while it is relatively easy to determine cost savings across an organization resulting from data insights, subjective elements of analytics value measurement are a challenge, even for the most seasoned data expert. That's why it takes the whole organization shifting—not just one person—to unlock the power of data. Companies today must focus on transforming culture.

One of Hackett's oil and gas clients has taken this journey, changing how data is seen and used in the organization. Initially, this client struggled with articulating how much of data's value is due to the broader technology environment that enables advanced analytics versus the business insights that are generated. To facilitate the cultural shift, they adopted an 80/20 rule. The team measures value on a case-by-case basis and incalculable benefits, such as risk avoidance, are categorized as "intangible value."

Data personnel and CIOs needs to speak the language of the business. Conversations with other executives and business users should focus on what those people face every day in their jobs and what data personnel can accomplish for the business. Talking to stakeholders in business terms is critical.

Benefits of communicating in a way the business can understand

Section 3

Using jargon and acronyms, or talking about the latest technology fad, is a path to failure. Reporting and analytics discussions should be about the business problem, not the technology. This fundamental starting point is critical, especially since some organizations today don't seem to understand how to use data effectively to improve business outcomes. Those in charge of developing a data strategy, leveraging the full value of their enterprise data assets, and building data literacy and fluency across the organization are finding it hard to get enough traction on pushing data forward. This is despite the skills on the team and the experience they may have.

This represents a serious skill gap, not in data and/or analytics fluency, but in communications and negotiating skills.

60%
Of CEOs
Say that IT Leaders must leverage their soft skill to effectively engage the business

The communication challenges between data analysts and key business stakeholders is like the old adage, "It's like they're speaking completely different languages."

The data team should establish an atmosphere of trust and alignment, focused on assisting the business in its strategic objectives. But given a gap in soft skills (communications, negotiations, presentation), many organizations today are not getting the true value out of their data, which ultimately reflects poorly on the data team.

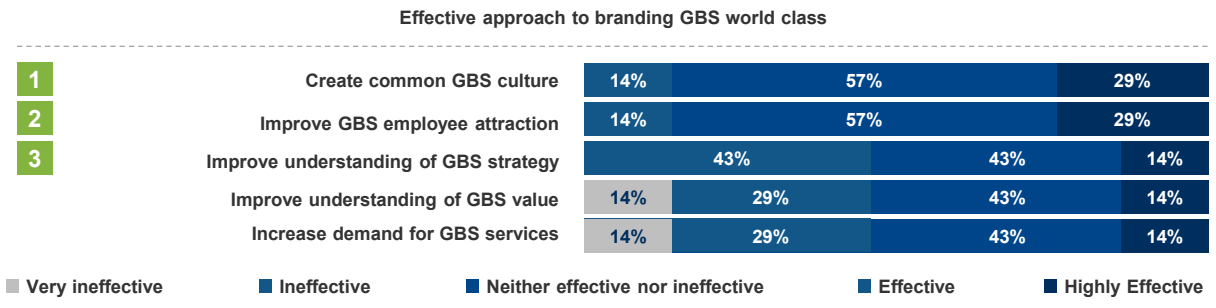
Generally speaking, data teams don't need training on the tools themselves, they need to learn how to change, improve, and evolve how they communicate. How do you communicate the value at a business level so that it's easy to understand?

When hiring new data professionals, testing a candidate's communications and interpretation skills is as important as testing their data fluency. Not all members of the organization will have the data literacy to interpret the insights drawn from data scientists and data analysts and to understand the business implications of their findings. Data personnel need to think like the business and adapt presentations and methods of engagement based on a business stakeholder's ability to comprehend and absorb the content. Adopting language that starts from a business vantage point, allowing a top-down approach to consuming the output from data professionals, is the secret sauce to creating a data-fluent culture.

Creating a data-driven culture | Section 4

Data teams need to go the route of Global Business Service groups. GBS groups realized that they needed to re-brand GBS and its value to the business, which is a crucial process that data teams must emulate. To transform the culture, data teams need to use active sales pitches, focus on improving customer relationships and value, and leverage branding language that means something to the business.

World-class GBS groups are more effective than peers in using branding to support their employee value proposition



The Hackett Group's world-class GBS study provides evidence that creating a common culture for their GBS organizations is the most effective method of branding their value propositions. A common culture is one of the most important levers that leaders can use to maintain organizational effectiveness. Culture expresses the collective goals of an organization through the values and beliefs that guide how individual team members act. For data teams to become effective, they need to leverage this cultural transformation and identify the behaviors they want to promote and build the culture around these. In order for an organization's data-driven strategy to be successfully implemented, the cultural and strategic transformations must work in tandem with each other.

Motivating the troops | Section 5

While driving to change the culture, data team leadership should also ensure they keep an eye on the overall talent management approach. A recent Hackett study, "Trends in Training and Upskilling Talent," found that IT organizations are struggling to keep up with a changing profile of required skills for key staff; few formally track skill demand/supply and link to a talent strategy. In particular, only 24% of those surveyed formally track and model changes in skill supply and demand and link them to an IT talent strategy.

Develop the following capabilities to foster the optimal environment for talents to thrive and fulfill potential:

Invest in communication, negotiation, and presentation skills of managers to build leadership capabilities.

Measure, analyze, and act on the drivers of engagement to boost employee morale and performance.

Use a mix of financial and non-financial rewards to make all employees feel valued.

Align workplace attributes that ignite data team engagement with the desired culture and organization capabilities to build a strong brand.

Building a talent strategy that supports cultural change | Section 6

From a sustainability perspective, building a data culture must be part of the daily conversation between the data team and the business, because otherwise these behaviors won't be ingrained. This also means that data team leadership should develop a plan for managing the talent and skill development in the team.

Here are key activities the data team lead should initiate (if not already started):

- Develop a vision for your data team and a differentiated talent and training strategy to enable it
- Assess current and future soft skills needs and capabilities the data team (critical and core skills)
- Approach current staff and high potentials and encourage them to develop new skills
- Invest in the data-business partnership to close gaps and facilitate workforce planning and strategy
- Understand and deploy multiple methods of upskilling and training staff so that they have different methods of receiving training

Bolster training and upskilling

Section 7

When thinking about bolstering soft skills, organizations should remember that educational materials alone aren't sufficient to solve the business problem and drive cultural change. Training is a means to an end, so they should focus on goals to accomplish and find in-depth training programs for teams that will support those goals. A data-driven decision-making culture is built through training and communication. In order to reach a high level of data maturity, change must have buy-in from executive leadership, ensuring that becoming fluent in data is a top-down initiative. Leaders across the organization need to work cross functionally and in coordination to manage the shift towards the new, standardized data language to be spoken across all levels .

In addition, technology organizations need to know how they can get more impact out of data insights. One such method is expanding the number of channels that insights are reported through. Multi-channel reporting and analytics allow organizations to gather and analyze data from all platforms and consolidate them into a central environment. These organizations must look at how they are interfacing with business stakeholders regarding data analytics. Technology organizations need to identify the best way to share insights with business stakeholders and develop a feedback loop that enables IT to continually tweak how they deliver analytics. Establishing analytics committees that contain technology and business stakeholders alike fosters a communicative and collaborative environment.

How to get started

Section 8

In order to get started on their journey to data fluency, organizations must develop a strategic vision that gains buy-in from all executive stakeholders. While the strategic vision may be a broad strategy implemented over a long period of time, they must also develop a detailed plan with achievable milestones. Creating this detailed plan holds each of the stakeholders accountable for the portion of the strategic vision that they are contributing to. Technology organizations must also work with the business units to understand what can be achieved with powerful data analytics so that they feel like this is a valuable initiative to undertake. Translating the technology investments into value that the business units will realize helps to bolster the business case.

When it comes to the implementation of a data-driven culture, consider several factors:

Form partnerships with training providers:	Partnering with external training providers allows organizations to strengthen data and business fluency. Pragmatic Institute is one example of a company whose data practice helps organizations leverage data to drive business outcomes.
Leverage all channels:	Leverage the power of every meeting and every relationship every day to promote the business-data fluency program.
Anticipate rejection:	Craft tested responses to overcome every anticipated objection. Effective marketing processes acknowledge that even inclined buyers have reservations. Customize the approach to sell.
Focus on the long haul:	Forge relationships with stakeholders that will bear fruit over time, rather than point of time transactions to solve immediate needs.
Target, not blanket:	Identify the stakeholders with the highest propensity to buy and focus energies accordingly. Track implications of business cycles, personalities, and internal events to identify opportunities and develop a predictive modelling that suggests when the customer will buy. This will drive a tiered strategy for account management, suggesting where investments in an onsite manager or regular meetings will pay off in scale.

The strategic planning, talent upskilling, and organizational changes associated with creating a data-driven culture should be a continuous effort. Organizations should make these aspects part of their yearly planning process and continually update their approach to ensure that change is sustained over the long term. As business units begin to realize the benefits associated with business-focused data analytics, the business case for continuing to invest in data analytics training will be easier to make.

Call to Action

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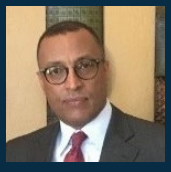

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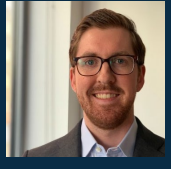

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The Hackett Group and its partners have collaborated to create a framework for transforming data science teams so that their services are ingrained into a corporation's DNA. Hackett maturity data accurately forecasts and tracks data culture maturity and a corporation's readiness to exploit the value of its data team. Hackett has developed methods and frameworks to instruct the transformation.

Pragmatic Institute is a trusted learning partner to professionals across data, product, and design—providing in-depth training, support and resources. With a focus on dynamic instruction, continued learning, and what works for today's businesses, Pragmatic Institute delivers engaging and impactful education to thousands of companies worldwide. Offerings include courses such as Business-Driven Data Analysis and The Business of Data Science.

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