



DECISION INTELLIGENCE BRINGS UNPARALLELED VALUE

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Mike Lock
Principal Managing Director, Aberdeen Strategy & Research

Executive Summary

Organizations are facing growing challenges in the marketplace. According to business leaders (35%), the competitive landscape necessitates becoming more data driven. Considering the volatility and uncertainty impacting leader action today, access to real-time data is fundamental to heightened decision-making.

Setting the Stage

Although businesses are beginning to report revenues above pre-pandemic levels, many global experts expect market volatility and uncertainty to continue for several more years. External pressures coupled with macroeconomic and geopolitical challenges are creating a perpetual influx of internal and operational problems for organizations to overcome. Data, for many, are the keys to navigating the complexity and chaos. Data provide for improved efficiencies and effectiveness – for innovation, competitive advantage, and exemplary operations.

Many new businesses today are starting, growing, and maturing as digital natives. However, many more organizations of all shapes and sizes are experiencing midlife crises and are on a journey to transform, digitally. They are seeking to capture new strategically-relevant data while at the same time make sense of their own internal digitization efforts. Data lakes are overflowing. By most estimations, approximately 2.5 quintillion bytes of data are created daily.

It should come as no surprise that **37% of business leaders report more data being available than can be used for meaningful analysis** (see sidebar). The exponential increases in data, the competitive landscape, growing data silos, and the need for more sophisticated analytics are all driving increased investments in business technology.

Faced with seemingly endless data sources and widening skill gaps, business leaders are investing in technologies that tear down data silos and provide unified, actionable insights and increased speed to decision. With the emergence of the 4th Industrial Revolution (I4.0), Best-in-Class (BIC) are investing in cloud-computing, data analytics, and artificial intelligence (AI), to spearhead their agendas. They cite data analytics and digital fluency as the skills most critical to success in post-pandemic environments (50% and 44%, respectively). These leader organizations are investing in systems *and* skills to enhance decision intelligence.

Top Analytic & Reporting Pressures

37%



More data available than can be used for meaningful analysis

35%



Competitive landscape necessitates becoming more data driven

35%



Disparate datasets (i.e., data silos)

32%



Critical business decisions require more sophisticated analytical support

Source: Aberdeen, 2021 (n=240)

A Holistic Approach to Decision Intelligence

Organizations are supporting analytic capabilities in one of three ways: (1) primarily/exclusively on-premise; behind a firewall with traditional client-server or web-server based analytic functionality, (2) primarily/exclusively in the cloud; using Software-as-a-Service (SaaS) analytic applications or hosted third party cloud-based infrastructures, or in (3) a hybrid environment; a mix of on-premise and cloud-based applications and supporting infrastructure.

Aberdeen's research findings demonstrate that an exclusively on-premise approach to data management has fallen out of favor with many top performing companies, but is still in use for many. Best-in-Class companies these days are more likely to migrate some of their environment to the cloud and operate with a hybrid data infrastructure, while other 'born-in the-cloud' firms have embraced a single or multi-cloud environment for many years running. Leaders cite greater security, data modernization, and improved performance as the leading reasons for moving to cloud-based environments, while others seemed to be deterred by a perceived lack of security. However, effective decision intelligence is not predicated on the construct of the data environment, but rather enriched with the right capabilities and organizational maturity (see Figures 1, 2, and 3 on pages 5 and 6).

As business scales so generally does the potential number of data sources used for analytic purposes. Across small, medium, and large enterprises it is common to find from one to more than fifty sources of data *capable* of feeding analytic processes. According to Aberdeen research, on average, over one-third (36%) of **Best-in-Class organizations report 20+ available data sources** as part of their analytic strategies as compared to just 19% of All Others.

BICs are routinely looking wider, deeper, and further for relevant insights. Taking into consideration decision windows are continually closing (i.e., time to decision continues to lessen), 67% of analytic professionals in leading organizations report they can access needed information within the required timeframe (compared to 42% of All Others). Access improves speed.

Data Preparation, Data Science, & Access to Data

Aberdeen's research repeatedly demonstrates how quality decisions stem from an analytical value chain, of sorts, that includes:

- ▶ Reliable and intuitive access to data
- ▶ Enhanced or augmented analysis of that data into usable insight
- ▶ Fluid exploration and delivery of that insight to key stakeholders

While there are technologies that support each of these areas, top companies are more likely to see them as cohesive philosophy for transforming raw data into deliverable insight, and as typical, the technology represents the supporting backbone of this value chain. Research shows how Best-in-Class companies are more likely to deploy simultaneously, data prep tools to help cleanse and enrich their information, data science capabilities to layer sophisticated analytics on top of human business intuition, and traditional analytics tools to help visualize and socialize those insights.

First and foremost, to be useful, data must be cleansed and standardized for analytic usage. Prepared data represent completeness, uniformity, and consistency – datasets are reliable. Clean data represent accurate values and conform to business rules – datasets are valid. Given the volume of data managed by leading organizations, they are 1.5x more likely to incorporate data cleansing, profiling, and deduplication technologies to ensure the right datasets are available to drive decision intelligence.

Considering the heightened focus on data cleansing, Best-in-Class organizations are 4x more likely to report higher maturity levels of data management and integration. Compared to 43% of All Others who rely on highly manual or spreadsheet-based analytic processes, Aberdeen research reflects that leading organizations are leveraging centralized systems and improved integration efforts to facilitate access and improve speed to decision.

Businesses just a few short years ago relied on data scientists to lead their analytic capabilities by asking the right questions, building the right algorithms, and telling the right stories. However, **technological advances have reduced reliance on employing teams of scientists and analysts.** Still, Best-in-Class are 1.8x more likely to incorporate data analyst/scientist functionality within the organization.

The science, analysis, and reporting are increasingly being embedded into the software, the applications, and the platforms. Users now have the power to ask the right questions and tell compelling stories without the need for advanced skillsets. In fact, nearly three-out-of-four (72%) data users/consumers report they do their own analysis and customize their own dashboards.

Data Analytics & Artificial Intelligence

Data analytics and reporting are quickly becoming standard managerial responsibilities – hence the heightened critical skill focus. Figure 1 below shows the actions being taken to improve organizational analytic and reporting capabilities. Best-in-Class firms are 2.2x more likely to implement

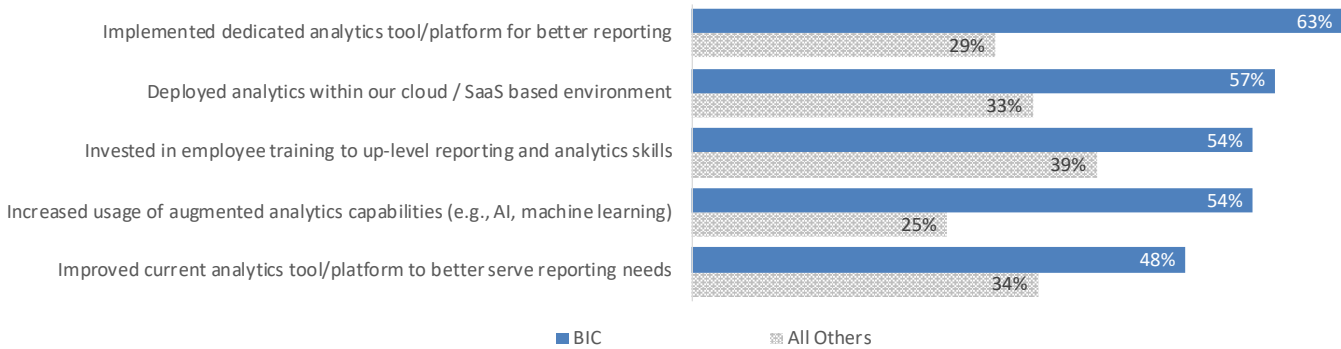
Best-in-Class are

1.5x

**more likely to use
data cleansing
technologies than
All Others**

dedicated tools and platforms and are 1.4x more likely to invest in upskilling their employees to take full advantage of the technological gains.

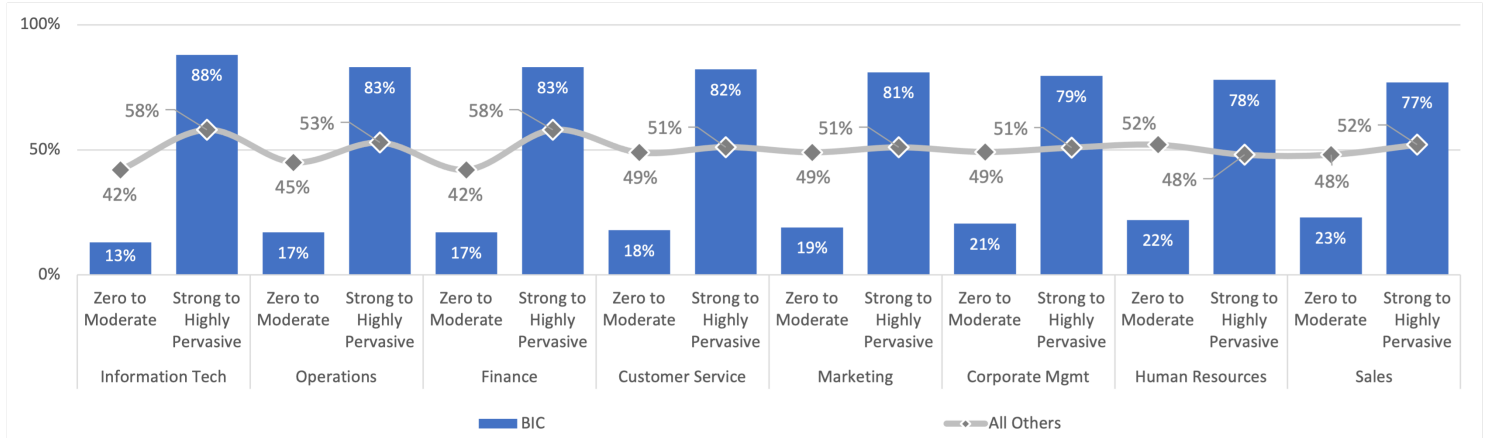
Figure 1: Top Actions to Improve Analytics and Reporting



Source: Aberdeen, 2021 (n=240)

Data analytics, across functional boundaries, is gaining traction. The investments and efforts of Best-in-Class can be seen in Figure 2, below. Compiled from two recent analytic studies, these organizations report strong to highly pervasive use of analytics and reporting across most all functions. All Other organizations tend to invest more in their IT, Operations, and Finance functions to enhance analytics, reporting, and decision making.

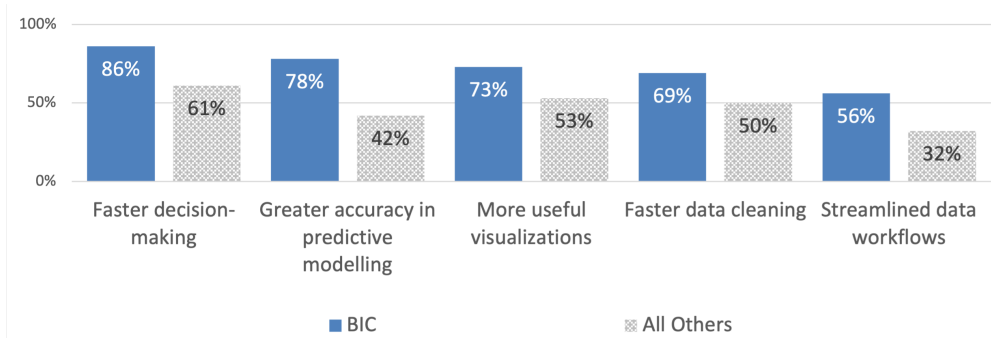
Figure 2: Analytic and Reporting Usage Across the Enterprise



Source: Aberdeen, 2021 (n=525)

Technology is accelerating the decisions required to establish and maintain competitive advantage. In fact, half (49%) of Aberdeen’s Best-in-Class organizations are investing in, and reporting that **artificial intelligence (AI) will be a mission-critical element of their business strategy** – faster decision-making being cited as the leading benefit of AI (86% reporting – see Figure 3 below).

Figure 3: Reported benefits of incorporating AI into analytics and reporting



Source: Aberdeen, 2021 (n=178)

When it comes to leader organizations, 41% report AI and augmented analytic capabilities are prominently featured in their current analytic strategy – this is 5.1x more than All Others, who in comparison either have no interest in these capabilities, do not have them today but plan to invest in the infrastructure, or have AI and augmented analytics but use them in a limited capacity (27%, 38%, and 28%, respectively). Three-out-of-four (76%) BICs use these capabilities to enhance data visualization to drive better decisions.

They are also 2.2x more likely to have implemented augmented data management using AI and machine learning than All Others. These enablers are improving speed to decision for the Best-in-Class. To this end, decision intelligence is a product of natural evolution and quickly emerging as the next step in business intelligence (BI).

The Business Case & Bottom Line

Aberdeen’s Best-in-Class are navigating complex, often unpredictable environments via increased use of analytics and reporting. These organizations are relying on decision intelligence to deliver value. An analytic mindset starts at the top. Best-in-Class are 2.8x more likely to have corporate initiatives encouraging data-driven decisions.

The key performance indicators most influenced by analytics and/or business intelligence tools across the finance, customer, process, and people bases are revenue and expenses, customer retention and satisfaction, quality control and cycle time, and employee turnover and skills. Best-in-Class are 2.2x more likely to use interactive data visualization tools than All Others to promote sharing and common interpretations.

Best-in-Class are 2.5x more likely to have strong, or mature, processes in place to share data across business functions. When compared to less digitally mature organizations, year-over-year, these leaders are realizing:

Best-in-Class are
2.8x
more likely to have
corporate initiatives
that encourage
data-driven decisions

- ▶ 2.6x Improvements in Operating Profit
- ▶ 2.2x Improvements in Revenue
- ▶ 1.7x Improvements in Speed of Decision Making
- ▶ 1.6x Improvements in Data Sharing & Collaboration

Forward-leaning initiatives that encourage data-driven processes are a fundamental imperative. Investments in artificial intelligence, cloud-computing, and data analytics are discretionary investments. However, when initiatives and investments align, the resulting decision intelligence brought to the table delivers unparalleled value to the organization.

About Aberdeen Strategy & Research

Aberdeen Strategy & Research, a division of Spiceworks Ziff Davis, with over three decades of experience in independent, credible market research, helps **illuminate** market realities and inform business strategies. Our fact-based, unbiased, and outcome-centric research approach provides insights on technology, customer management, and business operations, to **inspire** critical thinking and **ignite** data-driven business actions.

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