2019 data decisions survey: how businesses use data to make critical decisions - and how they overcome the obstacles that stand in their way

Overview
Thanks to continued technological innovation and the digitization of business, organizations today have unparalleled access to data. Putting that data to work by applying analytics that derive actionable insights can have a profound impact on a business, no matter its size or industry. For example, by using data to more effectively personalize and/or scale their products and services, organizations can achieve greater operational efficiency, improved customer satisfaction, and higher profit and revenue levels.

Data can also enable strategic, tactical and operational decision-making. More than 80% of our survey respondents reported that data is guiding their decision-making at least 50% of the time. Most data-informed decisions apply to customer experience, strategic planning and business processes and operations, and according to our survey respondents, success with data-driven decision-making is most apparent when applied to customer experience.

The expansion of data as a driving business force has led to a welcomed explosion in the volume of data being collected and used by organizations. However, this impressive data growth has also created a corresponding boom in the availability and variety of basic data warehouse technologies. As a result, organizations are struggling to balance their enthusiasm for data and its ability to guide strategic business decisions with an increasingly complex and often insufficient data warehouse landscape. In fact, most (60-73%) of all data within an enterprise goes unused for analytics because it is inadequately stored and structured / their data solutions are not powerful enough. (Forrester)

The objective of this research was to decipher how exactly organizations are using data to make critical business decisions and identify common challenges that hinder data-driven advancement. Our research indicates that organizations are striving for easier data integration from various sources to ensure better analytics performance and have their data ready for analysis at a fast rate. Organizations also reported that the biggest data warehouse issues include slow data query performance and a lack of full support for hybrid and on-premise deployments.

Read on to learn how organizations are faring when it comes to incorporating data into their decision-making via four key findings that outline the current realities of a data-driven approach to business.
**Finding #1: The data-driven trend is alive and well**

Using data to drive more intelligent and productive decision-making has emerged as one of the top business priorities of this decade. And for good reason: by deriving insights from their existing data, organizations can better anticipate market shifts, manage risk, maintain ideal inventory levels, optimize pricing structures and even hire the best talent. The proliferation of data across the enterprise has also enabled harmful technological and departmental silos to dissipate, allowing organizations to embark on more strategic, impactful data-driven initiatives.

Our findings support the widespread data-driven trend in business today and bodes well for the future of enterprise data analytics. More than 72% of the business leaders we surveyed reported to have a ‘good’ or ‘complete’ understanding of data and its value, and the majority of respondents indicated that they were satisfied with their organization’s data strategy. Even more encouraging, the organizations we surveyed are using training, cross-functional teams and a data-driven culture to solidify data’s role in their business.

**Finding #2: BI and advanced analytics applications aower data-driven decision making**

Enthusiasm for data-driven strategies is a wonderful thing, but actually putting data to work is a more nuanced undertaking that requires sufficient thought,
time, enterprise-wide support and technology. To realistically execute on their data-driven goals and reap the benefits data analytics can provide, organizations are embracing a variety of business intelligence (BI) tools. Advanced analytics applications and processes are also gaining impressive traction, and data scientists have become some of the most sought-after professionals.

According to our research, more than 71% of organizations are using data analytics to power their BI tool(s). This is made possible by businesses adopting data science more readily (51%) as well as more advanced analytics applications and processes (48%). When it comes to using data to enable more effective decision-making, we found that most data-informed decisions apply to customer experience, strategic planning and business processes and operations. The areas where data is used the least include regulatory/compliance, new markets and products and services. According to our survey respondents, success with data-driven decision making is most apparent when applied to customer experience.
“A holistic data strategy is crucial to not limit the scope of data analytics to solely customer experience. Organizations that ingrain a data-driven mentality into their company-wide DNA gain access to dynamic and automated operational BI versus static reporting of business data. What’s more, a comprehensive data-driven approach can also enable the creation of new business models, services and revenue streams.” – Mathias Golombek, CTO of Exasol

Finding #3: technical and operational challenges hinder data speeds and scalability

Speed and scalability are critical when it comes to implementing data analytics and fostering a culture of data-driven decision making. But even the most enthusiastic and resourceful organizations can encounter technical and operational obstacles that prevent them from taking advantage of more forward-looking analytic insights such as recommendations, predictions and forecasts.
For instance, our research found that while 80% of organizations believe data should power more decision making, only 24% have appointed a Chief Data Officer or Chief Analytics Officer. Additionally, according to the respondents in our survey, the business areas most in need of a data shift include sales, operations and marketing — three fundamental areas that desperately require a data-driven approach to satisfy customer expectations and stay ahead of savvy competitors.

Our survey respondents did indicate that overall they’re satisfied with their data strategies,. our research also shows that organizations would like to see more forward-looking analytic insights such as recommendations, predictions and forecasts. Organizations are also striving for easier data integration from various sources to ensure better analytics performance and have their data ready for analysis at a fast rate. According to our research, the biggest technical barriers to establishing an improved data strategy include the following:

- High cost of provisioning software and hardware
- Data security, protection and compliance
- Slow data performance
- Disparate data sources
- Data across geographies

“Demand for improved data strategies is exploding, and new technologies such as cloud analytics, massively parallel processing (MPP) and in-memory analytics make it feasible to become a data-driven company. Organizational challenges
such as missing skill sets, no dedicated competence centers, insufficient executive representation and a lack of company-wide data strategy can be difficult to overcome, however. Complex technology landscapes with limited legacy systems also tend to hold organizations back." – Mathias Golombek, CTO of Exasol

**Finding #4: Data warehouse providers create optimization obstacles**

Arguably the most vital component of any data-driven organization is the data warehouse. By storing all of the data generated by various departments and regions of a business in a central location, data warehouses turn operational and external databases into meaningful data that can be used for strategic decision making. Data warehouses also enable core competencies such as data analysis, report generation and other ad-hoc queries.

Amazon (23%), Oracle (22%) and Snowflake (11%) are the top three data warehouse providers used by our survey respondents. The biggest issues indicated by respondents for these providers include slow data query performance and a lack of full support for hybrid and on-premise deployments. Survey respondents also reported that they feel stifled by vendor lock-in (60%).

57% of respondents reported experiencing poor or slow access to the right data. The three main ways this is negatively impacting their organizations are:

1. Inability to access real-time analytics
2. Inability to scale
3. Inaccurate business intelligence

With faster access to data, our survey respondents said they believe their organization would experience:

- Improved customer experience management,
- Product, services or program improvement and innovation
- Optimized pricing strategies and go-to-market programs.

Conclusion

Organizations’ enthusiasm for applying a data-centric approach to business is high, with the majority of enterprises embracing a variety of BI tools as well as more advanced analytics applications and processes to execute on their data goals. But a lack of speed and scalability are proving to be consistent challenges - threatening to impede the data-driven trend if they're not addressed immediately.

As demonstrated by our research, the inability to integrate data warehouses into existing IT infrastructures has emerged as a primary bottleneck for organizations - with the majority indicating they consistently struggle with their provider’s data integration and accessibility capabilities.

To thrive in an age of data-driven business and ensure long-term relevance and innovation, organizations require high-performance, in-memory analytics databases like Exasol’s – so they can derive value from data faster, easier and more cost effectively than ever before.

For more information on transforming how your organization works with data (either on-premises, in the cloud or both), please visit www.exasol.com.

“A powerful operational analytics layer on top of a well-designed and governed data lake empowers organizations to get more out of their data, provide a greater swath of users access to relevant insights and apply complex analytics on larger data sets. Further, by unifying the separated worlds of traditional data warehousing and more current AI and data science, organizations can get the maximum value out of their data.” – Mathias Golombek, CTO of Exasol

Survey methodology

To better understand how organizations are leveraging data to make more intelligent and productive business decisions, Exasol conducted a survey of 1,034 professionals across North America who are involved in the purchasing decisions at their organization. 60% of professionals surveyed were female and 40% were male. Respondents’ organizations spanned the telecommunications,
healthcare, retail and consumer, education and finance verticals, among others.

**About Exasol**

Exasol is the analytics database. Its high-performance in-memory analytics database gives organizations the power to transform how they work with data, on-premises, in the cloud or both – and turn it into value faster, easier and more cost effectively than ever before.

To learn more about Exasol please visit [www.exasol.com](http://www.exasol.com)