

BUSINESS INTELLIGENCE

Four key selection criteria when choosing a modern business intelligence platform

The business intelligence and analytics landscape has experienced a significant transformation for several years now. With massive volumes of data, more data living outside the enterprise data warehouse, and increasing user demand for speed, autonomy, agility, and smart analytics—organizations are struggling with an increasing divide between end users and centralized IT teams.

When an organization is ready to move to its next modern business intelligence (BI) platform, look for a solution that can enable IT leaders to govern, support, and scale multiple integrated environments—while providing end users with autonomy, ease-of-use, and speed to work with both edge and governed enterprise data. The BI solution should also enable the centralized team to better serve their end users by providing true self-service across a single view of all business data for not only the analyst but also for non-data-savvy business users. This will foster the confidence and trust in data that senior executives demand.

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Agile, governed analytics in the era of data discovery

End users, driven by a thirst for data-driven daily decisions, have started their own analytic initiatives on decentralized data using desktop data discovery tools. These "shadow" initiatives have increased end-user autonomy and provided instant gratification, but they have also created analytical silos and dangerous inconsistencies in data analysis.

The centralized teams—gatekeepers of mission-critical data—are burdened with legacy technologies, legacy reporting requirements, and legacy processes, all of which have prevented them from meeting the business's need for speed, agility and personalized insights.

Without this agility that the business demands, or the consistency and governance IT require, an organization cannot become data-driven. In the 2019 Magic Quadrant for Analytics and Business Intelligence Platforms, Gartner predicted that "by 2020, organizations that offer users access to a curated catalog of internal and external data will derive twice as much business value from analytics investments as those that do not." ¹

It's clear that mistrust in the data provided by discovery tools results in more arguments over numbers and less time spent making data-driven decisions. It's in this context that an organization's next BI platform should provide a means for centralized and decentralized teams to collaborate around a "shared version of the truth."

A modern BI platform should be designed from the groundup based on the idea that trusted, and well-governed data is not at odds with speed and ease of use. By leveraging modern technologies like artificial intelligence and cloud computing—multi-tenancy, virtualization, machine learning, and web-scale architectures—it is possible to combine the centralized and decentralized models of BI, delivering the best aspects of both: enterprise scale end-user self-service without analytical silos. "Centralized teams usually do a good job when it comes to consistency, governance, and shared best practices. However, they can't deliver the domain expertise and responsiveness that most organizations require. Decentralized teams face the opposite problem. They have plenty of domain expertise and responsiveness, but lack consistency across their information sources and analytical models." ²

Solving these real-world analytics problems is something that cannot be fully addressed by the user interface alone. While providing an intuitive experience is critical to analytic success, the most significant challenge in analytics continues to be unifying and refining data for business use—making data "business ready." It could be argued that one of the biggest weaknesses in the dash to data discovery has been that it fails to address the complexity of data in most organizations. A modern BI platform should embrace that complexity and provide a solution to tame it.

Working with data to support analytics should not be the exclusive domain of IT. Business users should also have the tools to prepare their own "edge" data and combine it with the trusted, centrally managed data from IT to analyze complex business processes. A modern BI platform should provide both easy-to-use data preparation capabilities for self-service as well as the powerful data integration technologies required by IT.

For everyone to make confident decisions, it is critical to maintain consistency and trust in the data. To support this, the following four criteria should be used to help select your next BI platform.

1. Data integration and preparation

Whether it is existing data warehouses, data lakes, cloud applications, or transactional systems, capturing and unifying all data sources regardless of size, structure, or speed so that there is one consistent view of the information is critical. For example, combining multiple data sources that each has their own definition of "customer" and unifying these disparate sources into a single version of "customer" for all users. A modern BI platform should have the necessary pre-built connectors, live or real-time access to an existing warehouse, the capability to build a data warehouse from transactional data, query federation, intelligent data navigation, and a wide range of built-in data mapping and extracting capabilities to accomplish data integration with agility.

A core principle of successful business analytics is that all data must be refined before it can be used by business users. The refinement can be as simple as turning 15 operational data tables into a representation of facts and dimensions or as complex as creating a business rule that leverages data from diverse and constantly changing data sources to create a common and reusable business metric.

The historical challenge in data integration is that it takes too much time and too many resources to refine the data for day-to-day use. Additionally, managing changes in underlying data structures prevents this process from keeping up with new business demands. In recent years, organizations have been investing in data lakes to remove this overhead. Although a data lake does remove much of this overhead, they are structures better suited to data scientists and tend to be unsuitable for normal business use. To overcome the speed and data source changing challenges, a modern Bl platform should provide Al-powered data integration automation, and smart data change detection to enable enterprises to create an agile semantic layer—or a "shared version of the truth"—that adapts at the speed of business today.

2. Networked data

A fundamental capability of a modern native cloud BI platform is multitenancy, which enables the creation of virtual—not physical—BI tenants that relate to each other. The use of virtual instances is important because, traditionally, delivering trusted and reliable data across the enterprise largely depended on physical replication of BI infrastructure—not just hardware but also data, metadata, user profiles, system configurations, etc.—making it a time-consuming, repetitive and expensive effort.

To allow business teams to work on their own, while staying networked to a central, governed data set, a modern BI platform should allow different groups, such as finance, customer support, sales, and marketing to use their virtual instances of the data to gain access to centralized data and blend that with their local data and spreadsheets. This paradigm creates consistency and collaboration between IT and business teams, ensures centralized governance, and empowers data ownership, independence, and self-service data blending at the point of impact.

Networking data creates unique and exciting possibilities. If we consider the analytical fabric as an organically grown or "crowdsourced" network of insights, it becomes a powerful method for harnessing the collective intelligence of an organization, turning the idea of "enterprise business intelligence" into a reality.

3. Flexible user experience

The vision of many data-driven organizations is for every individual within an organization to have business data at their fingerprints to improve even the smallest decisions they make. Business people must have tools that provide flexibility and freedom to answer any question and blend their own user-generated data with enterprise data. To do this, a modern BI platform should deliver a user experience that uniquely meets everyone's needs by supporting all the different styles of analytics, including pixel-perfect reports, highly interactive and responsive dashboards, intuitive visual discovery, native and offline mobile, embedded smart analytics, and self-service data preparation. A one size fits all approach to BI where everybody uses a single style of analytics cannot scale to meet the diverse needs of most organizations.

A modern BI platform should tear down the traditional walls between dashboards, reporting, and discovery to create an adaptive interface where any user can automatically surface new, AI-powered personalized insights and easily interact with business data to make better decisions. Equally important, these decisions can be made with full confidence if all analytics styles pull data from a common and reusable agile semantic layer, which delivers the necessary governance to ensure a single version of the truth.

4. Smart insights

The main reason for including smart insights as a key selection criterion is to make it easier for the average business user to make data-driven decisions. This is realized by applying machine learning algorithms to dashboard KPIs to automatically diagnose or uncover drivers affecting business performance. This leads to machine automation of tasks to accelerate time to insight, discovery of relationships that the human may not have even considered or doesn't have the skills to perform and to move analytics from the descriptive to diagnostic and predictive—smart insights helps business people go from "what happened?" to "why did it happen?" or, to "what will happen?"

 Gartner, Cindi Howson, James Richardson, Rita Sallam, Austin Kronz, Magic Quadrant for Analytics and Business Intelligence Platforms, Feb 2019.
Gartner, Kurt Schlegel, 3 Strategies to Balance Your Data and Analytics Team, Jul 2018. It's important that these Al-driven insights are designed for a business user and can be personalized yet still governed through an agile semantic layer. The combination of smart analytics and governed BI means that smart insights can be applied across extended enterprise datasets, not just personal data sources.

Summary

These selection criteria must, of course, be supported by an enterprise analytics architecture that scales. A modern native cloud architecture provides a low total cost of ownership (TCO), rapid deployment, automated zero-cost, zero-pain upgrades, programmatic life cycle management, and standards-based, open integration. These capabilities enable IT teams to build production-scale analytical applications that deliver business value daily and greatly reduced administrative costs.

A modern BI platform will empower business users with the speed, autonomy, and agility they demand, while giving IT leaders the governance mechanisms they need to deliver a complete and consistent view of the business.

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