

Overcome the 5 challenges of cloud BI

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Companies have increasingly recognized the importance of business intelligence (BI) and analytics — the ability to transform data generated through business transactions, interactions, social exchanges and sensor-based systems into business insights. These capabilities underpin business strategy, productivity growth and innovation. A 2013 Gartner survey of more than 2,000 executives found that analytics and BI were the top technology priority.¹ The promise of BI is that it can deliver a holistic, real-time and illustrative view of a company's performance and strengths; the challenge is that gaining this perspective requires access to and integration of data from across the enterprise. As companies generate greater volumes of data, managing multiple data sources and analyzing large data sets will be increasingly challenging.

With the accelerating pace of business, a company's ability to respond to changing conditions and identify new opportunities depends on an accurate view of its performance. Business analytics and its associated technology is vital for executives to improve operations and make strategic investments. All too often, however, data reside in a labyrinth of on-premise and cloud-based solutions scattered across business functions. While individual departments have the tools they need, organizations find they must devote significant resources to aggregate and synthesize data. In these situations, the insights that BI delivers are based on outdated information, limiting their effectiveness.

The rapid emergence of promising cloud solutions has the potential to accelerate the transition to enterprise-wide cloud-based BI. Therefore, a long-term BI strategy — one that selects and integrates solutions with the right capabilities — is critical to facilitate a smooth transition and address the evolving needs of the enterprise.



¹ Gartner. *Hunting and Harvesting in a Digital World: The 2013 CIO Agenda*, January 2013.

5 obstacles to extending BI to the enterprise

Recent trends have complicated the IT environment at most companies: Purchasing decisions that once went through the IT department are increasingly being made at the business-unit level. New investments and requirements were skewed toward business user-driven data discovery techniques to cover the broader range of users and use cases that are increasingly on mobile devices. In some organizations, departments such as HR or accounting have moved to cloud-based solutions with BI tools optimized for that function, even while the rest of the enterprise uses a legacy IT platform. The result is that companies, particularly larger organizations, end up with a hybrid of on-premise legacy systems and cloud solutions.

From the BI perspective, cloud and on-premise solutions provide, in most cases, identical BI functionality to the business users. However, the difficulty lies in managing data that will require integrated reporting from multiple sources, each with its own data conventions, and aggregating information in a central location to enable enterprise-wide BI. A growing number of businesses have embraced cloud-based BI solutions, although a hybrid BI approach may be necessary in some cases to accommodate infrastructure, volume, sensitivity and security issues. In general, five challenges can impede the ability of companies to harness the full power of BI, so executives should consider how BI solutions can address them effectively.

1. Data integration. BI requires companies to manage and gather data across different systems and geographies. If IT hasn't configured the individual systems to interface — a common occurrence once business units adopt their own cloud software — employees must consolidate data manually, a process that requires significant time and resources on a recurring basis. Moreover, without a data governance strategy to support and manage varying data hierarchies,² companies won't be able to obtain a consistent and single version of the truth across multiple on-premise and cloud systems.

- 2. Data quality.** Each solution has its own required data fields, so bringing different sources together can take significant time to clean data. The human component must also be managed: Incomplete records or errors can undermine data quality. While BI tools for individual systems can help identify data issues, a lack of consistent standards across systems can result in recurring problems with data quality.
- 3. Data latency.** In today's dynamic business environment, access to real-time information is a top priority. At many companies, however, extraction and aggregation typically occur on a monthly basis, in part because the process is so laborious. As a result, the analysis relies on data that is often not up-to-date by the time it is shared with executives to inform decision-making.
- 4. Data security.** Moving data to the cloud can potentially compromise data security efforts and thus increase risk. To safeguard data, companies need to choose cloud providers that offer network segmentation, password protection, encryption and other security management services to achieve a similar level of protection as on-premise systems.
- 5. Systems agility.** As businesses grow and their needs change, a rigid BI solution can quickly become obsolete. Therefore, it's critical for users to be able to collect and manage data centrally and change systems requirements based on business dynamics with short lead times. While automation expedites tasks, systems with self-service for data loads and reporting — as well as the capability to make manual entries — can bring greater flexibility and integration to BI.



² Data hierarchies are systems of data objects that enable information storage and retrieval. For more on data governance and management, see *The best of data governance*. Visit www.grantthornton.com/issues/library/whitepapers/advisory/2014/data-governance-overview.aspx to read.

Cloud BI benefits

The continued evolution of cloud BI solutions will soon enable the seamless integration of multiple data sources. As companies generate more and more data, these solutions will become increasingly sophisticated, offering granular detail on every facet of the organization and its customers to help cloud BI reach an ideal state of user-driven and self-service data discovery and analysis.

Unified, secure view of real-time data. A central BI solution coupled with a robust data governance framework will enable collaboration among business units, which all have access to a single, constantly updated version of data. With a consolidated view, companies can analyze data much more efficiently, and the insights they develop can support the decision-making process more effectively. Moreover, an enterprise platform facilitates unified identity management, with a single login for each employee, as well as advanced security services.

Ease of implementation and scalability. Business units can adopt cloud solutions without buying hardware, installing software or configuring systems. By eliminating the internal IT infrastructure (such as provisioning of servers) and the upfront capital costs, cloud BI solutions enable the CIO to focus resources on strategic initiatives rather than on maintenance and support. As businesses grow, cloud BI solutions can accommodate increased demand from end users without support from IT.

Reusable, adaptable solutions. Cloud BI solutions offer unique opportunities where certain common analytics functions — such as financial statements, spend analysis, and sales and marketing campaigns that are developed for one business unit — can easily be extended on the same platform to other units. Similarly, multiple functions that share business streams can use the same cloud BI solutions and split the costs. Since cloud products are updated frequently by the provider, users always have access to the latest functionality.



The rapid increase in cloud spending

Over the past several years, cloud-based solutions with BI capabilities have supplanted on-premise solutions as the preferred delivery method. Gartner forecasts that by 2016 the majority of IT spending will be for cloud solutions.³ As a result, global spending on public cloud-based software and platforms is predicted to rise from \$47.4 billion in 2013 to \$107.2 billion in 2017, a growth rate that far outpaces spending on enterprise software as a whole. Notably, software as a service accounts for nearly two-thirds of cloud spending.

Preparing for the future of BI

In the next several years, a company might have a different cloud solution for each business area or function, and built-in adapters will be a regular feature to expedite data extraction and analysis. Since most companies have at least some on-premise systems, the transition will occur over a period of years. To prepare for the future, companies should weave BI into their overall IT strategy, making it a priority during planning and purchasing decisions. In addition, a detailed roadmap can help facilitate an orderly transition from individual silos to a cloud-based enterprise BI solution. As part of the process, it's important to align the location where data reside with the reporting tools to cut down on unnecessary steps in data aggregation. Central management of data alleviates this concern, although companies may need to take a hybrid cloud approach to conform to existing infrastructure and systems.

³ Gartner. "Gartner Says Cloud Computing Will Become the Bulk of New IT Spend by 2016" (press release), Oct. 24, 2013. Visit <http://www.gartner.com/newsroom/id/2613015> for more information.

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To get the greatest return on cloud BI investments, companies should focus on five foundational areas (HR, finance, supply chain, procurement and billing) that together provide a comprehensive view of a company's performance. These areas are well-positioned for the cloud: They deal with a wealth of data and rely on the coordination of employees across the organization. Many businesses have already adopted the cloud for discrete functions such as human capital management and accounting, so they have a head start in extending the cloud to other areas of the business.



Since BI is only as effective as the data it draws on, companies should seek to foster a culture of data stewardship. Indeed, companies that treat data as a valuable asset rather than just a check-the-box exercise will be able to get more from their cloud BI investments. By adapting processes and investing in training, executives can encourage employees to improve data entry by emphasizing how accurate data can lead to better insights and decision-making — factors that employees can often lose sight of when pursuing their daily tasks. An emphasis on data management by the C-suite and targeted incentives can help employees commit the time and resources to better data management and analytics.

It's long been accepted that knowledge is power, but in the modern business landscape this equation isn't so simple. As companies generate increasing volumes of data, BI plays a critical translation function, in effect turning raw data into insight (knowledge) that can support strategic decision-making — a key factor in gaining a competitive advantage (power). A cloud-based BI solution can expedite this progression, giving companies more accurate and up-to-date information while using fewer organizational resources.

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