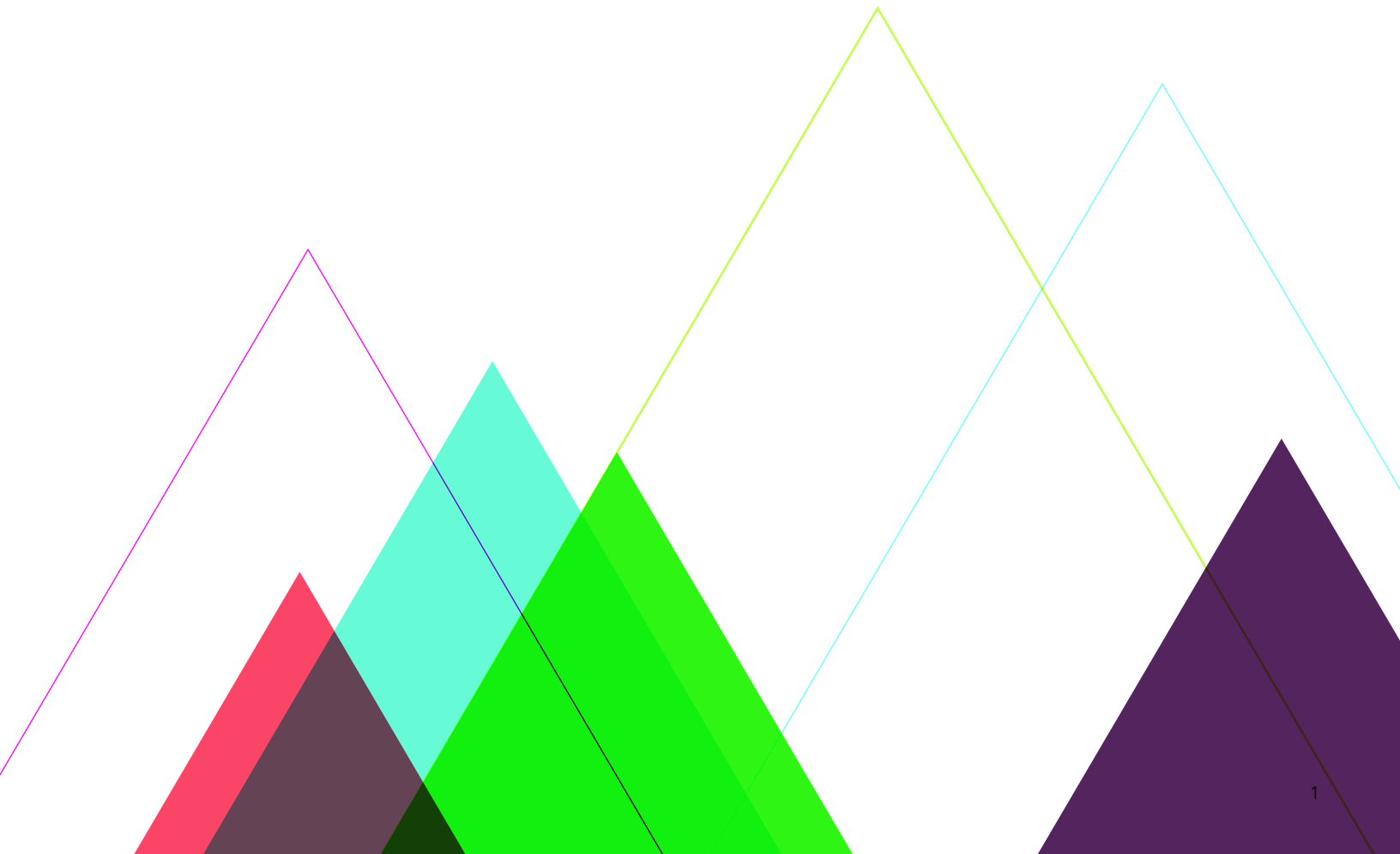
7 Megatrends Driving the Shift to Cloud Business Intelligence

Cloud business intelligence has the potential to unify all data, make it available to everyone and enable highly agile decision-making. Here are seven of today's trends that drive businesses to cloud BI.



Executive Summary

When first introduced more than 50 years ago, BI involved relatively small volumes of data and was accessible by just a handful of highly trained technologists. Today, entire communities of socially engaged users collaborate in the cloud to make sense of large volumes of data. In the not-so-far future, devices and machines will automatically process nearly unimaginable volumes of data for real-time optimization of business insight.

TREND NO. 1

IT is Losing Governance and Authority.

IT delivers monumental value, but as shadow IT proliferates and IT loses buying power, it's increasingly overlooked.

TREND NO. 2

Data is Everywhere, Yet Divided.

Data sources have increased exponentially and exist outside the corporate firewall.

TREND NO. 3

Data is Big and Messy.

The volume and variety of data grow at a pace nearly beyond measure, and Big Data now includes both structured and unstructured data.

TREND NO. 4

Without Real Time Insight, Agility is Futile.

The velocity of data is such that organizations need to access it in real time to keep up with the speed of business.

TREND NO. 5

The Pace of Innovation is Roaring.

Driven in large part by consumerization of IT, business users now demand real-time software updates. Not weeks. Not even days. Now.

TREND NO. 6

We Live and Work in a Social World.

To move faster, organizations increasingly prioritize the ability to collaborate with partners inside and outside the enterprise.

TREND NO. 7

We Work From Anywhere, Anytime.

The workforce is increasingly mobile, and must be able to access data from anywhere in order to remain efficient and productive.

These trends combine to drive organizations to understand and serve customers better; get faster time to value from their data, and innovate within their businesses at the speed of markets—all of which motivate a move to cloud BI.

For the purpose of this paper, we define cloud BI as a BI solution that encompasses the entire stack of tools and technologies required to put actionable data in the hands of users. This includes visualization, analytical engine, data warehouse, and extract, transform and load (ETL) capabilities.

TREND NO. 1

IT is Losing Governance and Authority.

Cloud BI enables IT to mask the complexity of technologies that exist outside of business users' visibility, so both business and IT can focus on the type of innovation that best leverages their core competencies.

According to Gartner, in 2000 IT controlled 80 percent of the technology dollars. By 2014, this is expected to drop to 65 percent. By 2020, if the current trend continues, IT will control just 10 percent of technology spending.

Today, 54 percent of organizations already use some kind of cloud platform. It's a major reason that line-of-business owners have been able to sidestep IT in technology purchases and run "shadow" IT programs. And, 52 percent of senior IT managers say that their chief marketing officers, in particular, make the cloud purchase decisions for e-commerce, BI, and customer relationship management (CRM).

A significant portion of IT operations are already invisible to business users, so with business users enabled to purchase and deploy technologies without IT support, how can IT retain relevance? A clear answer emerges when examining the strategic role IT plays in the deployment and management of cloud BI.

Cloud BI eliminates IT headaches over management of performance and system maintenance of on-premise BI systems, and equips IT to play a more strategic role. Effectively, IT is relieved from owning the entire end-to-end delivery of infrastructure, data transformation, analysis and reporting. Cloud BI also frees IT from the need to evaluate and purchase different pieces of a BI solution, and spend a year or more engaged in complex integration activities. With cloud BI, IT quite visibly contributes to business value—and gets the credit that it deserves. And since cloud solutions can gather data about system performance and metrics, it is possible to deliver internal analytics and benchmarking solutions across verticals.

TREND NO. 2

Data Is Fragmented

The number and type of data sources—many of them outside the corporate firewall and in the cloud—have increased exponentially in recent years.

When asked what hampers them most in effective decision-making, more than 80 percent of IT executives said data availability and consistency issues. And the number one factor that drives analysis of Big Data is how to find correlations across multiple, disparate data sources. These facts underscore the second major trend that drives organizations to cloud BI: that the number and type of data sources—many of them outside the corporate firewall and in the cloud—have increased exponentially. This is very difficult to manage with an on-premise BI solution, when users are forced to sacrifice speed and usability for potential innovation.

Further fragmenting data, sources now come from multiple departments and workgroups, and data is increasingly trapped on individual users' PCs, mobile devices and consumer cloud services. What's worse, it opens the door to the creation of multiple versions of data that conflict with each other. Data propagating across multiple systems, all of which are actively using the data, leads to multiple versions of the facts.

Cloud BI systems naturally emerge as a solution for integrating data from such diverse sources as Marketo, Oracle, Facebook, Excel spreadsheets, Salesforce, NetSuite, Siebel, Twitter and others. All of this data can be integrated using a coherent data model, and transformed and loaded into a common database structure.

Advanced cloud BI providers offer open APIs to enable IT to easily add new data sources, change data transformations and modify the logical data model for complete control of the technical layer of the datamart. After the changes are published, users can immediately begin building new metrics, reports, and dashboards, or these new objects can be created via API.

With leading cloud BI, data fragmentation is simply not an issue. And users are ensured they always have one version of the facts underlying their dashboards.

TREND NO. 3

Data is Big and Messy

By 2020, business transactions on the internet will exceed 450 billion per day.

Big Data comes from the volumes of enterprise application data created daily, the increased number of people, businesses and devices connected to the Internet, and the inclusion of social and machine data into the enterprise information mix.

Make no mistake, Big Data is big. From 2005 to 2020, the amount of digital data in the world will increase by a factor of 300. This means the 130 exabytes stored in 2005 will be transformed to 40,000 exabytes—or 40 trillion gigabytes—by 2020. Expect digital data to double every two years from now until 2020. Today, 90 percent of data is created outside the firewall in customer touch points.

But perhaps more importantly, Big Data is messy. Included in these figures is the unstructured data generated by social media sites like FaceBook, LinkedIn, Twitter, and YouTube. How can a business transform unstructured data into insight?

Big Data also creates headaches in scalability: under traditional BI models, IT needed to estimate peak loads and build systems to accommodate them. But an essential aspect of a cloud BI solution is that it can scale to meet the needs of the business. Here, scaling means more than just the capability to store large amounts of data—although that's certainly important. Scaling also means the ability to load and transform large volumes of data from disparate sources at performance levels that ensure near-real-time access to data analytics and visualizations.

Leading cloud BI vendors partner with companies like Cloudera, HortonWorks, Amazon, and Rackspace to offer Big Data solutions that scale no matter how fast or large data happens to be. Plus, they build out their own infrastructure, like columnar databases, to manage Big Data and provide GUI-based services, reporting and analytical capabilities. This takes some of the complexity out of creating Hadoop jobs with Java or Python,

TREND NO. 4

Without Real Time Insight, Agility is Futile.

The ability to collect and analyze data in real time is now a priority for most businesses.

Gone are the days when weekly snapshots of sales were considered good enough for tactical or strategic decision-making. Today, access to data in real time is critical to business agility. Recent research by InformationWeek shows that the ability to collect and analyze operational data in real time is now a top goal of the majority of organizations.

But traditional BI solutions are challenged to do this. They tend to be siloed—support only a single operation, such as supply chain or CRM—and can't easily integrate data from a variety of sources. They also have trouble bringing in data from outside the firewall for analysis and insight.

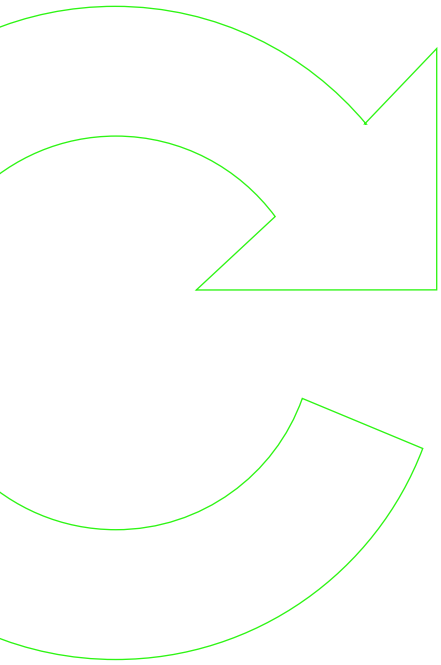
Cloud BI makes the goal of near-real time analytics a reality. Data can be streamed from a broad range of sources to provide up-to-the-minute insight into operations, customer behavior or market perceptions. Cloud BI also improves on traditional real-time dashboards—which are generally limited to one application or a single operation—in the number and variety of data sources it supports. This allows them to provide context for complex business scenarios. And their ability to incorporate real-time data from outside the firewall—from Facebook, Twitter, YouTube and other sources—also informs more effective decision-making.

This combination of both the size and velocity of data today creates tremendous opportunities for business leaders to know and respond to customer desires and trends. Leading cloud BI vendors allow organizations to aggregate and analyze data to achieve insight across massive volumes of information in real time, taking full advantage of these trends. One significant advantage that cloud BI offers is the ability to leverage additional platform resources on-demand, as needed to process increased data volumes or dynamics.

TREND NO. 5

The Pace of Innovation is Roaring.

In Cloud BI, solution improvements are continuous and immediately available to all users.



The pace of innovation is unrelenting. Governments, universities, and businesses together invest $1.4 trillion in R&D every year. Moore's Law—that technical innovations double in function every 18 months—has proven surprisingly robust. However, 91 percent of senior executives at global organizations say that although innovation is a top priority at their companies, almost a third admit that the accelerated pace of technological advancement is having a negative impact on their businesses. The number one priority of organizations that wish to innovate: the ability to understand customers and anticipate market evolutions.

This fast rate of innovation plays out in specific ways in the software industry. Unlike the legacy on-premise world, where improvements are saved for "big bang" releases or upgrades and require manual updates and rollouts, cloud services deliver continuous improvements to customers in a transparent fashion. Each day, new technologies emerge to automate process and power productivity. Drawing on technology tools and data from across an organization, nowhere is the ability to stay ahead of the pace of change more apparent than in business intelligence.

Speed of innovation also refers to what happens when organizations use cloud BI. Dashboards from cloud BI implementations are complete in days, not months, and ad hoc reports are available in real time. By contrast, adding a single report in a legacy BI platform could evolve into a six-week IT project, completed by a technical resource instead of the expert in the report's data.

A critical attribute to look for in cloud BI platforms is the separation of the logical data model from the physical data model. This layer of abstraction allows cloud BI providers to swap in new, higher-performance storage technology as it becomes available—without impact to customer datamarts or the user experience. Behind the scenes, leading cloud BI vendors constantly evaluate new technologies and build up infrastructure to increase performance and reduce costs. All this is invisible to the user.

The most innovative cloud BI providers push out platform enhancements on a weekly, if not daily, basis, and major releases at least monthly—all of which is done without unscheduled downtime or disruption to users.

TREND NO. 6

Our world is social.

To drive business forward, it's essential that users can collaborate in real time over a shared version of facts.

Our world is social. Facebook, Twitter, LinkedIn and myriad other social networks have transformed not only how we socialize, but how we work, too. They've given rise to the prioritization of collaboration in the enterprise, and we see collaboration motivating the adoption of Google Apps, enterprise social networks like Yammer and Chatter, and task management platforms like JIRA, Asana and Basecamp.

How then, can BI afford to remain only in the hands of trained technical personnel? Traditional on-premise BI was built for the information-is-power days. A recent survey of senior IT decision-makers ranked the ability to collaborate with others as the No. 3 priority in their BI strategic plans.

Cloud BI dashboards allow for real-time, collaborative decision-making because data can be shared securely with all stakeholders. Because data is fed into the system in real time directly from its sources, users always share a single source of the facts. This eliminates the disconnects that occur when "snapshots" of data in Excel or other static data collection or analytic tools are passed around.

Cloud BI also enables collaboration capabilities that support cross-departmental and virtual teams through pixel-perfect PNG/PDF export of reports and complete dashboards. They also allow users to have real-time conversations with each other on the reports themselves. Any changes to reports or dashboards are instantly propagated to all users in a cloud BI service, and reports can be pushed to social streams such as Chatter or Yammer to support real-time brainstorming, or embedded into systems already seeing heavy use by business users, like Salesforce.com.

TREND NO. 7

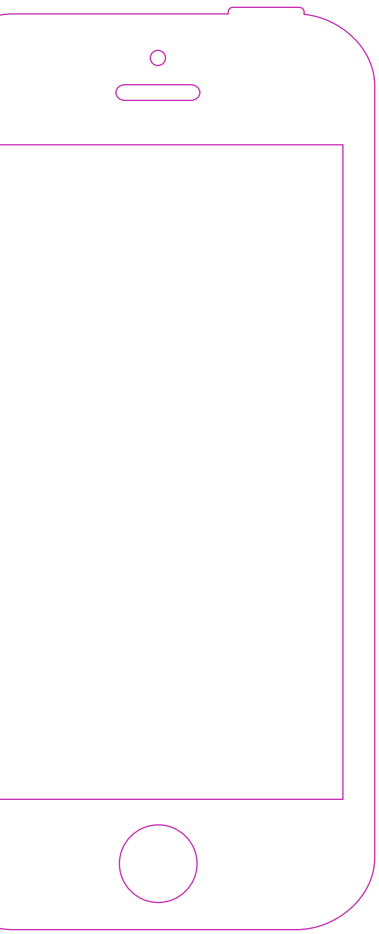
Mobility

By 2015, more than 50 percent of mobile BI users will depend exclusively on their mobile devices for BI access.

A recent Credit Suisse research note predicts global sales of smartphones will increase by 46 percent in 2013 to 687.9 million units, and by 2014 will exceed 1.05 billion units annually. The increasingly mobile workplace has positioned users who work from home, airports and cafes to demand the same access to core business technologies as they would have at the office. And, executive leadership is setting the same expectations for productivity and performance.

Gartner predicts that by 2015 more than half of mobile BI users will rely exclusively on mobile devices for delivery of BI insight. This is expected to increase the number of BI users by 20 percent.

Small wonder that a large percentage (44 percent) of organizations that already use BI plan to add mobile BI interfaces in the near future. This in fact is the No. 1 priority for BI that senior IT executives named.



Mobility is another area where cloud BI excels. Because all data is stored in the cloud, and all analytics are performed there, users can access and use cloud BI applications at any time, from anywhere. Also, for performance reasons, the majority of the "work" and multi-tiered caching is shifted to the cloud to make up for the inherent limitations of mobile devices. This improves the speed at which BI insight is delivered.

The increased popularity of bring-your-own-device (BYOD) programs at organizations adds complications that many on-premise BI providers can't solve, as they can't recognize the broad range of devices employees may use. Leading cloud vendors use HTML5 to enable users to access reports across a broad range of mobile platforms. When applications are written in HTML5, they recognize when they're delivered onto a mobile device, render automatically to fit the device's screen and adjust to device-native pinch, flip, and swipe means of navigation.

Security is a critical issue when organizations open up BI to mobile users. To enable secure delivery of sensitive content onto mobile devices is not easy—which is why traditional BI providers have only started to offer this capability. Cloud BI vendors ensure the security of data that passes to mobile devices in a variety of ways. At the web API layer, user authentication and authorization verifies that a valid identity is attached to each request and is authorized to access requested resources. Logical security measures and relationships between individual users, projects, data stores, and the meta-model are configured within the control layer. All inputs and outputs are protected by secure socket layer (SSL) encryption.

About GoodData

Today's Only Complete and Open Cloud BI Platform

GoodData offers enterprise IT the only complete and open BI solution delivered as a service available today.

With more than 20,000 customers, 90, 0000 active users, and an 84.7 percent adoption rate, GoodData leads the charge at helping businesses embrace these seven Megatrends. IT can use the GoodData platform to create BI-enabled applications customized to the needs of the business. The GoodData platform can aggregate endless diverse data sources, including Salesforce, NetSuite, Marketo and Excel to deliver real-time dashboards and powerful ad hoc reporting. It can handle both the increasing volume and velocity of data, and keeps up with the latest innovation through continuous enhancements that don't disrupt the user experience. Finally, the GoodData platform does all this in a collaborative context, and with support for any mobile device.