

The Emerging Importance Of Data Visualization (Part 1 of 2)

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In general, organizations and people alike are no longer eager to take their time to see results. With the ability to access information instantaneously, the way people use data is changing. The goals in the workplace have shifted from trend analyses of stale data towards information that is captured and analyzed in real time. Consequently, organizations are becoming more attached to the ability to access, analyze, and share information multiple times each day. As business intelligence solutions begin to accommodate this new landscape, the way organizations interact with their information systems requires a new set of tools. With the focus on Web 2.0 and the ability to interact with information in a way that mimics the way people think, instead of having to learn the required steps to perform system functions, end users expect seamless interaction within their work environment.

Part 1 of this article identifies the reasons why data visualization tools are becoming more important within analytics and business intelligence overall. Part 2 looks at how this trend affects the future of business intelligence. This includes the benefits of visualizing KPIs, how data visualization helps expand the role of embedded analytics within the organization, and the increasing use of unstructured data.

With business intelligence, the unfortunate reality is that for so long many BI vendors have missed the curve. Whether based on reality or based on perception, BI has battled bad PR in relation to its user friendliness. With BI's new attachment to a Web 2.0 reality, the way interaction takes place has changed. Now decision-makers want to be able to access and manipulate data the way they analyze data to match what comes to them intuitively.

Unfortunately the shift towards adoption of Web 2.0 strategies to enable a more interactive sphere of business intelligence has not readily been adopted among many organizations. There are the few that are early adopters of easy-to-use front-end tools that make access to back-end data transparent, but for the most part, BI is still seen as necessary but not easy. The expansion of dashboard use within the organization, however, is the one extension of business intelligence that is able to provide end users with the interaction and data access they require without the perceived lack of user friendliness.

The emergence, maturity, and expansion of data visualization tools bridges the gap between traditional BI and widespread access to information. To enable pervasive BI, organizations are required to implement solutions that encourage organization-wide implementation of BI. In many cases, the user-friendliness factor is what identifies adoption rates. BI is widely used because people are comfortable using the application. Even with all of the added value it provides, many users find the benefits of BI outweigh the benefits of using Excel independently. This is why many vendors mimic Excel's user interface to create a look and feel that complements current end-user comfort and experience.

Within the past few years the role of data visualization and front-end BI (such as dashboards and interactive reports) has increased and become one of the main components of a BI solution. Instead of looking at static reports or even ad-hoc reports, or OLAP, executives and decision-makers want to define goals and measure targets (KPIs), drill through information to identify problems before they occur, and interact with their colleagues to share information and work on projects. Aside from the assumed ability to intuitively perform these tasks, advanced visualization features are also expected.

The inherent benefits of using strong data visualization are twofold. First, because many people are visual learners, strong interactive components enables quicker adoption because of the perceived user friendliness. Second, scorecards and dashboards are becoming much more popular and provide expanded access to BI where it never existed. Decision makers that expand beyond super users can now access business intelligence without having to learn how to interact with access data stores.

Why the Buzz?

Many BI applications use data visualization tools to bring essential business intelligence information to organizations. The creation of sexy applications that make data fun is the way widespread BI adoption occurs. Traditional models which require super users to act as BI liaisons for the organization no longer meet the needs of constantly changing environments. Decision makers require their own access to information in a way that is easy to use and decipher. This is why data visualization is slowly becoming the forefront of BI adoption.

The emergence of best-of-breed players can't be overlooked. In the past, BI solution providers offered data visualization in the form of dashboards and scorecards as part of their own solutions. In addition, a few best-of-breed data visualization vendors existed to pull data and analytics within a visually pleasing framework to create a positive user experience. As the market shifts, more best-of-breed vendors have emerged to provide strong visualization features with the ability to leverage BI and data warehousing vendors.

Data visualization solution providers move past the traditional confines of business intelligence by going beyond the data warehouse and offering organizations multiple ways of accessing and interacting with data. Whether using a data warehouse, streaming real-time data, or writing data back to a data store, data visualization tools allow organizations to interact with the information they need in the way that best suits their organization. With data access more flexible and interaction more user-friendly, data visualization tools such as dashboards and scorecards are becoming synonymous with BI in general.

Keeping the Balance Between Providing Value and Strong Visualization

Although there is no denying the value-add of strong data visualization within any BI tool, the issue to remember is whether the data visualization that is being used is providing additional value or taking away from its actual use. Within any business intelligence application the main goal is to access the right data at the right time to enable proactive decision-making. Without the ability to get the right information and be able to make that data actionable, any data visualization initiative is short. Overall it becomes important to keep a balance between the visualization of a solution and the features and functionality that is enhanced through the use of data visualization tools.

Part 2 of this article delves into the practical applications of data visualization and how its use will continue to become important within the overall use of BI.

About the Author

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