



Giving BI a Human Touch

Executive Summary

To ensure widespread adoption of business intelligence (BI) practices, organizations have been increasingly deploying state-of-the-art tools and techniques. However, most of these initiatives have met with little success. Why? One reason: The majority of BI systems have been designed on the basis of how technology approaches a problem. However, BI technology rarely meets its objective of aiding human cognition of a particular business scenario. Even the improvements in technology have not helped to increase BI adoption, because lost in the pursuit of technological excellence is a lack of focus on user behavior.

Instead of forcing the user to adapt to the technology, it is necessary to make BI tools as

intuitive as possible. To achieve this, IT organizations must listen to what business users want and provide them with the required information while delivering an appropriate user experience.

We have created a unified and human-centric solution that provides users with customized and credible information, business continuity and an avenue for virtual collaboration that we call behavioral BI (BBI). BBI espouses four key principles to recreate the BI foundation required to deliver a superior user experience (see Figure 1).

This white paper lays out the conceptual framework for embracing BBI. We then discuss BBI's implications and benefits across industries.

The Four Pillars of BBI

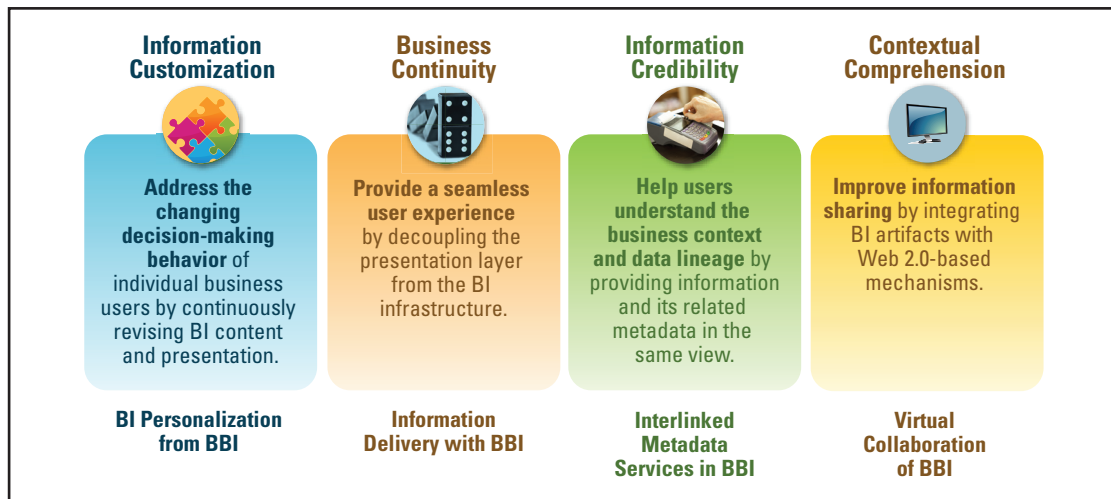


Figure 1

Information Customization

By personalizing the report or dashboard views that users access, companies can enrich the user experience. Here, personalization does not merely refer to modifying report color and background; it primarily attempts to capture the information access behavior of the end user. Getting there requires a customized BBI portal that serves as a one-stop-shop for all BI user needs. Access to information (e.g., relevant processes, reports and metrics) is determined by strict access and security privileges mapped to specific roles within the organization.

Figure 2 illustrates the home page of our BBI-based BI solution portal. Our solution tracks individual usage patterns to display reports that were recently retrieved, are frequently accessed and are similar to reports retrieved by peers. The user can easily drag and drop portlets to design a personal home page. Our approach allows users to add/remove applications from the portal in a few clicks. Users can also choose from various layouts and designs to suit personal taste and convenience. The landing page carries a snapshot of key metrics in a dashboard, enabling users to get a quick view of the data, easily track information and take immediate action.

Over time, the system is intelligent enough to notice a trend in the user's access behavior, and the reports will dynamically adapt the content to reflect these patterns.

Personalized BI Portal View



Figure 2

Seamless Business Continuity

This principle involves the decoupling of the presentation or access layer from the rest of the BI infrastructure. An independent and centralized Web-based report access application has multiple benefits:

- The BI team can drastically reduce its efforts and costs around training users on BI tools.
- End users avoid a steep learning curve each time a BI tool migration or upgrade exercise is undertaken.
- BI users can have an enriched view of insights integrated from multiple BI tools (e.g., Business Objects, Cognos, MicroStrategy, SSRS, etc.) and information sources (Internet, RSS feeds, market news, etc.).

This principle is also based on the premise that removing the dependence of the access layer on the BI tool enables "back-" and "front-end" environments. By making the back-end infrastructure available as an ensemble of service-oriented components, IT organizations can more effectively manage technology changes while minimizing the impact on end users.

Information Credibility

One of the key benefits of BBI is that it wraps the reports/dashboards with operational metadata. This helps answer many questions that otherwise would result in a gradual drop-off in user interest and trust in the data. Metadata provides users

with process details, as well as definition, lineage, latency, percentage of data rejects, etc. This helps users understand the process related to creating the report, the business and technical metadata that underlies the report and information regarding the report owners. Tech-savvy users can apply these technical insights and even suggest required changes to the system administrator.

Interlinking an information unit with metadata and its source and transformation lineage allows users to verify the data in a few clicks. This lends a great deal of credibility to the data. By wrapping the metadata into the reporting architecture, business users can better understand the process underlying the report, as well as the attributes of the technical and report owners. This insight increases trust and user adoption.

A “report search” facility linked to business metadata is embedded to transform users from report finders to information seekers by providing an effective search capability that leverages the underlying business metadata model. The solution is capable of performing advanced file search, database search and content search to discover specific reports. Because users can retrieve relevant reports, this approach prevents report proliferation. It also allows users to drill down

to view more granular data without switching to another report.

Contextual Comprehension

Peer-to-peer communication is the most effective tool for learning and enhancing BI adoption. Leveraging Web 2.0 technologies to promote BBI for instant feedback and peer-to-peer communication improves sharing and understanding of information. It allows users to instantly log any issue or even a wish list that they discover while browsing through their reports. Users not only can provide reviews, but they can also see how others perceived a particular report, which helps increase credibility and user interaction. They can also request the administrator to publish the newly created report to the whole team and, importantly, instantly chat with other users and administrators to clarify and resolve problems. This helps the admin understand user needs promptly and improve the delivery of required information.

With BBI, users can also create mashups of reports by combining two reports into a single one. This helps in comparing the results of two reports side-by-side. They can use the easy-to-use interface of BBI to select the two reports, which will be displayed side-by-side on the same screen (see Figure 3).

Comparing Two Reports on One Screen

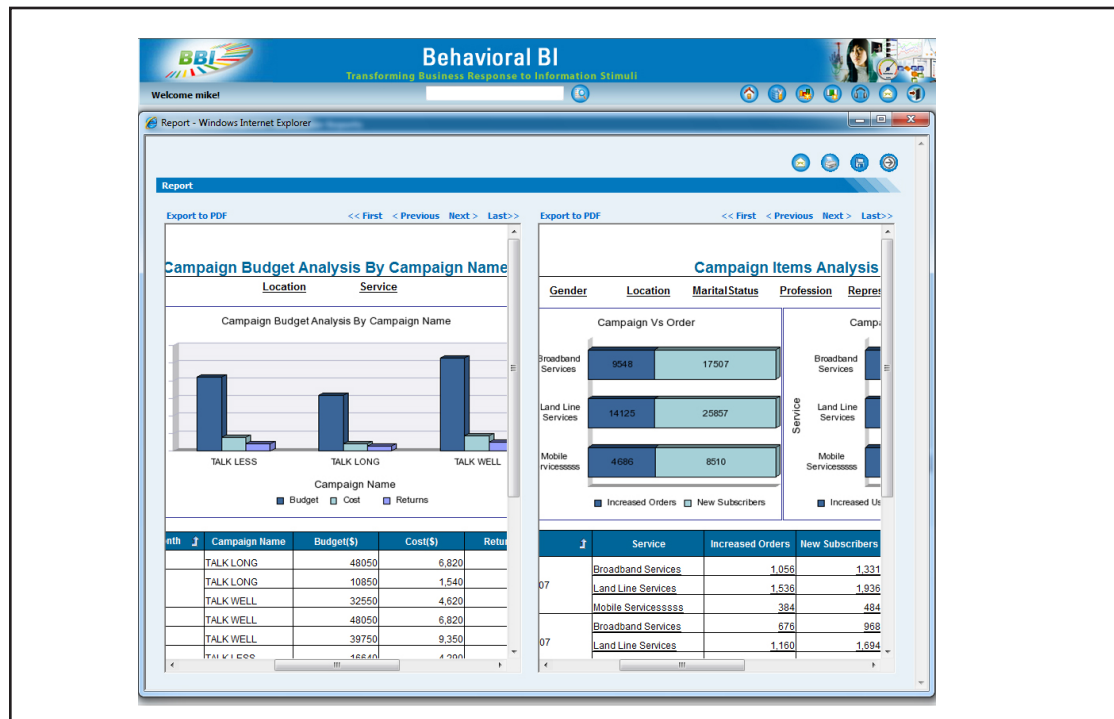


Figure 3

BBI: A Before-and-After View

Benefit Illustrated	Industry	Scene 1: Before Behavioral BI	Scene 2: After Behavioral BI
User Experience			
Record and identify usage patterns and modify report views accordingly.	Logistics	The fleet efficiency of a particular geography has been running low for the past few months. The manager opens the dashboard and drills down to the metrics for the state every day.	When the manager drills down to state-level metrics three times in succession, the system identifies the access behavior and displays the metrics directly on the dashboard home page.
Track metadata and lineage directly from the report.	Telecom	Churn figures drop unexpectedly. The region head calls all business managers to a meeting. After three days of analysis, the data used in the churn calculations is found to be incorrect.	When the region head “right-clicks” the churn figure, he or she can alert the system administrator about the suspected error. The administrator checks back and locates the error immediately.
Obtain insights from multiple sources and analyses in the same view.	Manufacturing	A procurement manager (a Cognos power user) draws inventory reports, receives vendor alerts using Hyperion, obtains cost analyses using SAS and tracks industry news via RSS feeds.	The central Web-based report viewing application integrates inventory levels from Cognos, vendor alerts from Hyperion, cost analyses from SAS, inventory levels from Cognos and an Internet RSS feed in the same view. The manager no longer needs to be a power user of any tool.
Get instant collaboration and Web 2.0-based knowledge sharing.	Media	IP creation and knowledge-sharing on ad campaigns developed by subsidiaries across the globe are done on an ad hoc basis. Many good ideas that are created in one region are not shared with teams in other regions.	An ad campaign lead can search the business wiki for ideas for adhesives and contact the author of the wiki best-suited to current needs. One click opens a messenger window and sets up a VOIP call between the involved parties.

Figure 4

BBI Applied Across Industries

Figure 4 explains the impact of implementing BI in different scenarios across a few industries. Scene 1 refers to the scenario prior to the implementation of the BBI framework; the corresponding Scene 2 depicts the change in the situation or experience once the framework has been successfully implemented.

So what is it in it for you? With BBI deployment, your organization can achieve:

- **BI-User Proximity:** Through a “pull effect” on users, BI adoption can be increased.
- **Increased ROI:** Through BI adoption and usage, ROI can be increased.
- **BI-Business Alignment:** IT can react in real-time to business needs/changes.
- **BI Maturity:** The organization is elevated to the next level in information management.

About the Author

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