TOP 5

Considerations for Enabling Self-Service Business Analytics

By William McKnight, McKnight Consulting Group

Businesses today need to consider the diminishing nature of what is unknown. With more data under management than ever before, organizations are increasingly embracing analytics as a way to predict behavior and intervene to achieve better results.

Analytics is how organizations put analytic data, or summaries of information, to use. For example, to effectively determine if a customer will make a purchase based on an offer, different types of data are needed: customer demographics, spending profiles and characteristics of the offer. From there, the organization can determine potential outcomes and how to proceed, which in this case may include refining the offer to the customer or creating more — or more timely — customer touches.

By definition, it's almost not analysis if a third party like IT personnel is heavily involved in the data access. In a self-service business analytics environment, IT can be somewhat disintermediated from the analysis process and instead focus on the setup.

As such, limited ongoing involvement from IT should be a goal in setting up user access to analytics. Working with the user community, IT should set up the environment to provide immediate navigation to the core analytic data, with clear paths to take the usual immediate business actions. What's left for the user is interactive access with the analytic data, going deeper and deeper into analysis.

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While few would argue with the notion of self-service business analytics, it takes considerable discipline, tactics and software to make it happen. Setting up the self-service business analytics environment requires special consideration of many factors. The following are the top five:

Consideration #1. Complexity of the Data Environment

The possibilities for information architecture are endless. There is no "one size fits all" in terms of architecture from company to company. Nor is there a "one size fits all" platform for data. It is likely that, one way or another, numerous data structures will store most of a company's analytics data, with a total many times that for all of its data. It is important to be able to access the entire data environment and not limit access to any data.

Information architecture is built from the ground up, with workloads being separated into their correct platforms and tied together by architecture elements. These architecture elements include data integration, data virtualization and master data management, as well as human components of data governance and program governance.

Agility is fused into architectures when users leverage what is in place for new requirements. It may extend an existing data store or two with more information for the requirement. Or it may flow data from a source into a new data store.

Take, for example, the possibilities for post-operational analytic data stores. There are relational row-based data warehouses, data warehouse appliances, in-memory-based data appliances that also serve as operational stores, columnar databases and Hadoop. There are also combinations of these, such as hybrid relational/columnar database management systems and appliances that are columnar. Most have validity in modern organizations attempting to make information into a data asset.

Data will be unconstrained in its movements to platforms. A self-service business analytics solution must be pervasive enough to deal with the myriad technological bases in which analytics data may reside.

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Consideration #2: Data Virtualization

Since data will, by necessity, be spread throughout the organization into heterogeneous data stores, the allocation of data to a platform will be ideal for the *majority* of its usage. It will not be perfect for *all* uses, however.

Data virtualization is the only bird's-eye view into the entire data ecosystem (structured/unstructured), with access to all of the data stores that have been identified to the virtualization tool, including NoSQL stores and cloud-managed stores.

Data virtualization is used primarily for providing integrated data access. It provides a means to extend the data warehouse into a virtual *concept*, as opposed to a single physical database. Data virtualization helps organizations deal with data mart sprawl by treating the enterprise as the unit of access instead of the independent marts.

Data virtualization is key to self-service business analytics. It brings value to the seams of the enterprise — those gaps between the data warehouses, data marts, operational databases, master data hubs, big data hubs and query tools. As such, its functionality in various areas needs to be considered in enabling self-service business analytics. This includes the data stores it can access, its intelligence in determining data for its cache, the optimizer's ability to manage the multiple optimizers of the data stores, user and security management capabilities, load balancing and its user interface.

Consideration #3: Data Governance

Data governance involves how data should be sourced, cleansed, managed, distributed and used. There is a clamor for a workable approach.

It's seldom that companies do not want to do data governance with their data projects. But it can be hard to start and get involved in data governance. Data quality, metadata and security are brokered by effective data governance organizations. Data governance input over interim and final forms of data is imperative as well.

Trust in the data accelerates business analytics, and that trust comes from sound data governance practices. This is essential for a self-service business analytics program.

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Consideration #4: Collaboration Functions

Elements of collaboration include an embedded discussion forum or a workflow component that makes it easy and delay-free for the user community to cooperate and partner to reach business conclusions. It includes star ratings, simple comments, interactivity, interfaces to internal social networks, unstructured data, security and bookmarks.

Among the elements of good collaboration are commenting, annotation, discussions, report approval workflow and prompts to action. Collaborative features should be considered essential in any self-service business analytics program accessing the information management stores.

Consideration #5: Time to Value

Performance is important, but it must be delivered quickly. There is an obstacle that keeps many a user away from the data, and that has to do with the time it takes to deliver projects on target to user need.

Despite good requirements gathering, the best feedback comes in the form of reviewing actual work that you are calling somewhat complete, which has led many to Agile methodologies.

Tools like the Toad Business Intelligence (BI) Suite can cut your time to market, in agile fashion, for business analytics.

To achieve self-service business analytics, you need a solid foundation and solid processes. If you do not take into account these considerations, it is mere re-labeling of "no service" business analytics and does not foster and maintain a healthy relationship with the user community and healthy exploitation of the data produced in the systems.

Toad Business Intelligence Suite for Self-Service Business Analytics

Self-service business analytics is a mentality, not a set of tools — but there are tools that support this notion of self-service better than others. These tools attack a very important component of the long-term cost of analytics: the cost of IT having to continue to do everything post-production.

There are a few areas that signify self-service business analytics tools that work best with a user self-service mind-set. These are exemplified in the Toad BI Suite.

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Comprising Toad Data Point, Toad Decision Point and Toad Intelligence Central, the suite offers access to a wide variety of data sources, allowing end users to do data integration on their own ("personal data integration"). It also provides strong data virtualization capabilities, extensive collaboration functions, and the ability to reflect data governance decisions within the data, with various shading for conformance to data governance policies. The Toad BI Suite adheres to Agile principles by being a quick installation and quickly assimilating into the environment.

Geared to end users seeking more advanced forms of self-service — and not just with basic business intelligence data, but with analytics data — the Toad BI Suite offers in-memory, high-performance data virtualization across heterogeneous data sources, with strong consideration given to the things that matter to self-service business analytics and, hence, the overall business. Learn more at http://software.dell.com/products/business-intelligence-suite/.