



Partnering with the business to create a successful self-service analytics framework

Times are changing: the evolution of an agile but controlled approach to BI

It's widely known that the landscape of data management has changed—data volumes continue to increase exponentially, data is being collected from more sources, and business users need more access. While the age of big data brings numerous opportunities for businesses to leverage real-time insights, it also challenges the status quo of IT's data ownership and delivery.

Traditionally, the way for business stakeholders to obtain insights was by

requesting a report from IT. This process was costly, and began with the business stakeholders funding a project to build a data warehouse or reporting system. Once built, the business user submits a request to IT with the requirements to define the report—and waits.

In this common approach, the IT department has full control over the data despite the fact that the real owners of the data are business users. The data is stored in the central data warehouse, cleansed and transformed, and then pending an IT query is delivered to the

business user to consume through standardized reports and ad hoc analysis tools—typically spreadsheets. Often, poor queries, due to a lack of understanding of the data or underlying business process can lead to flawed and inaccurate analysis. Additionally, this process is time consuming and frustrating for the average user. It often results in the user and IT having no other choice but to start the process all over again. It puts an unnecessary, avoidable strain on business and IT resources.

While structured processes and static dashboards still have a place in business, there are options available today to better fit the needs of business users who require more immediate answers. The modern data warehouse must be agile and adaptive, using tools that enable user-friendly agility and flexible architectures that quickly adjust to changing business needs. In the era of disposable analytics, IT has the ability to enable users with the power to use their data to pull their own reports, analyze the data and provide actionable insights.

Who owns the data?

The need for ready-access to data is driving a cultural shift in the BI landscape. Users want agile analytics—to get accurate, high quality data to the right people at the right time. With leading self-service visualization tools that are readily accessible, users are in a better position to analyze and explore the data more than ever before. Users have the domain expertise required to derive insights from the data being mined.

The primary constraint to the business user experience is the inability to directly access data in the system and perform real-time analysis. They want unfettered access to all data ... now! Yet, data must first be curated due to quality concerns, regulatory compliance, privacy laws, and confidentiality needs of the business, so that the right level of access is provided to business users based on role and analytics requirements.

The misconception of data ownership can be a hindrance to some organizations in making the shift to self-service BI. The typical assumption is that since IT is responsible for keeping data safe, accessible and with a high level of integrity; they also own the data. In the new world of agile analytics, the perception of IT as the owners of data needs to change. IT in this context should be seen as data stewards, where they are solely assigned the monitoring and oversight responsibility. As data and analytical functionality continues to be pushed out from behind the IT curtain into the line of business,

IT's primary role is transforming from one that was the development of ad-hoc reports for analysis, to one that facilitates access to clean, accurate and secure data.

Disruption of the traditional waterfall process

One certainty of business today is that data lives in many places: databases, warehouses, spreadsheets, flat files, and many more. Unlike traditional BI, not all data accessed needs to be stored in a data warehouse. There are times when urgent business requirements cannot be satisfied in a timely manner using the data warehouse alone.

To meet these demands and improve time to value, companies are starting to look to alternative methods to BI, perhaps the most popular being self-service. This requires IT to set up an environment in which users can create and access specific sets of BI reports, inquiries and analytics themselves—without IT intervention. This transformation means that the perception of IT's role is finally shifting, and in their favor, for the better. IT's role here is to equip business users with analytic tools, access to data, a scalable infrastructure and the guidance they need.

Self-service business intelligence requires that all types of data are made accessible by the BI implementation team—not just traditional, structured data. It may be that other sources of data, such as operational data, external information (but still relevant data) or analytic information from other sources, must be made available for easy assimilation of these new data sources—without IT assistance. In this case, data visualization provides a quick way to give rapid and flexible access to multiple data sources.

Visualization tools give users the ability to connect directly to, or extract data from a wide variety of data sources. And when users need to answer a question with more than one data source, they're quickly enabled to easily blend two data sources, without having to set up a new data warehouse or create more demands for IT.

Self-service paradigm

The popularity of business-friendly data analysis and visualization tools, and more recently the emergence of user-friendly data preparation tools, raises the question about the future of data warehousing and the consequences that go along with it. Every new concept has its own risks, and self-service analytics is not an exception. IT can help mitigate these risks by being proactive in delivering self-service capabilities.

Users have access to a variety of self-service tools today. Business users are looking for easy-to-use tools that let them retrieve and pull together data from anywhere on the fly. Users now have the ability to purchase tools and set up customized reporting systems—but the result can be chaotic, with each department creating their own conflicting performance metrics using tainted data. Without curated data in an IT-managed, self-service environment, it can lead to inconsistent and invalid outputs across business units. Even with data consistency, risk is inherent, but can be mitigated through proper governance implemented in the entire process. Any loop holes in the governance process can make it a mess, and as data issues erupt, the blame typically circles back to IT department—since they are perceived as the owner of all data sets.

Making the decision to evolve into a new BI approach is a significant undertaking, but it empowers IT to be more strategic in addressing big data challenges while exploring and integrating new technologies such as machine learning, predictive analytics and the Internet of Things (IoT). It enhances the abilities of the business user, permitting them to make faster, data driven decisions based on real-time analytics, potentially helping the business to better compete in today's marketplace.

Analyzing data and making decisions at the speed of business... not the speed of IT

Though users and the creation of new visualization tools are driving the shift for self-service BI, IT is charged with ensuring that the right tool is in place to support the needs of the business—along with making sure the data is curated and users have the right access. When selecting a visualization tool, IT should consider the criteria that will enable a self-serve methodology; some of which include an intuitive interface, rapid development capabilities, and security.

Step 1: Pick the right tool

Selecting the right tool is the beginning of an organization's transformation to self-service analytics. When making the selection, IT should partner with business users to evaluate the tools to identify the right visualization tool that aligns with the organization's culture, values and business requirements. Narrowing down to a focus of what capabilities they are looking for in the tool can help the business choose the right tool for its needs.

Step 2: Create the open environment

Creating a strategy which includes a technical and procedural framework designed to support business needs is critical. From a technical aspect, the architecture needs to support a highly accessible, but secure environment. Often referred to as an "exploratory" or "sandbox" environment with unpredictable load and usage patterns, this is a virtual playground for the data science team. It gives them the necessary ability to freely experiment with new data sources, analytic models and data transformations in order to uncover insights buried in the data and build predictive models of an organization's key business processes. It is loosely governed and typically allows the data scientists to use whichever tools they prefer in their exploration, analysis and analytic modeling, but doesn't compromise the integrity of existing environments.

Step 3: Implement a data governance framework

Data governance becomes especially important when allowing users to import ungoverned data sources. To ensure the data used is accurate, up-to-date and secure, appropriate standards for accessing data sources and maintaining a high level of security throughout the business is vital. A key enabler in employing a data governance framework is making the data definitions and quality understood by everyone in the organization.

Without an adequate understanding of the importance of an organization's data and its structures, it is difficult to deliver analytical tools that support effective decision-making and provide an overall view of what is happening, both within the organization and outside of it, as appropriate. Although executive interaction with business intelligence and performance management solutions generally involves accessing and interacting with dashboards and reports, it is still essential to understand how back-end data comes together to provide the necessary components that can enable better decision making. In a world where business units are becoming more self-sufficient and knowledgeable about managing their overall processes through the use of technology, it becomes more important to identify the value of data and its interaction across the organization.

The reality is that even though executives may not require this knowledge for their day-to-day tasks, understanding how data interrelates can improve the ability to link information, performance, and strategy more effectively. By identifying how business processes and operations relate to data, organizations can transform that data into actionable information that supports informed decision making.

Step 4: Empower user sharing, securely

If an organization gives users the power to create content, it should also give them the power to share it. It's important to deliver a secure platform where users can distribute their content to the right audience without IT involvement. In order to do this, an organization can make users content administrators. It's critical that the chosen visualization tool offers the integration and capabilities to leverage controls available through Active Directory. Ideally, the selected BI tool/platform should be able to integrate with an organization's existing security platform.

Step 5: Employ an Analytics Center of Excellence (CoE)

An Analytics Center of Excellence (CoE) is significant for a smooth transition to self-service delivery. IT is responsible for setting up the infrastructure to deliver analytics capabilities and operating models that enable business users to leverage curated data and create analytic dashboards. An analytics CoE may include power users, educators, information designers and developers who deliver sophisticated application development, but most importantly, enable the end user. Regardless of the design of the CoE model, understanding the business needs and its data are paramount.

Step 6: Develop a partnership with the business

IT should consider the initiative as a partnership with the business. Some practices to help enable a partnership and develop a self-service culture may include:

- Establishing a Community of Practice (CoP)—champion a visualization tool user group to share design ideas, ask questions and provide support
- Scheduling vendor sessions—schedule training sessions with the visualization tool vendor
- Providing IT services—offer IT support for users who need additional development and design support

Overall, business users should own most of the dashboard building and ad hoc analysis, but there will be certain instances where an organization needs “governed dashboards” with a designated “owner.” For example, an organization that needs a CFO dashboard should assign a central team to manage it. Identifying a team helps prevent the redundancy and confusion of allowing every business user the ability to access and create their own CFO dashboard. Whether the central team is in IT, business, or a combination of the two, the team is responsible for making sure that the dashboard is correct, accurate and maintained.

Scaling an analytic culture, not just building dashboards

It is more than just a great technology infrastructure. Self-service success must overcome organizational and cultural barriers. IT needs to provide an accessible support network for the business. This means putting capabilities and an infrastructure in place that allow for communication and collaboration. The end goal is to enable analytics projects to reach their potential and deliver high value to the business, suppliers and customers.

The days of delivering requirements to IT to write scripts and pull reports may be fading. IT can have more opportunities to be an enabling partner in the cultural shift to business-driven analytics. The transformation to a self-service culture can work if IT is in a partnership with the business. This means IT is invested in developing a self-service strategy that includes technology selection, change management and enablement programs designed to empower users to optimize their use of the visualization tool and find support.

Contacts

Richard Starnes
Principal
Deloitte Consulting LLP
rstarnes@deloitte.com

Tracy Ring
Alliance Leader
Deloitte Consulting LLP
tring@deloitte.com

Angela Alini
Senior Manager
Deloitte Services LP
aalini@deloitte.com

About Deloitte

Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee (“DTTL”), its network of member firms, and their related entities. DTTL and each of its member firms are legally separate and independent entities. DTTL (also referred to as “Deloitte Global”) does not provide services to clients. Please see www.deloitte.com/about for a detailed description of DTTL and its member firms. Please see www.deloitte.com/us/about for a detailed description of the legal structure of Deloitte LLP and its subsidiaries. Certain services may not be available to attest clients under the rules and regulations of public accounting.