



The Right Decision Requires the Right Data: Prescriptive Guidance for Leadership and Business Analysts by QuantumPM

Synopsis: Corporate leaders should spend their time analyzing key data, not collecting it. With the right technology infrastructure, executives can gain a competitive edge, and peace-of-mind, knowing their business decisions are based on the most accurate and timely data available. This Report examines the history of Business Intelligence (BI), discusses some of the technology challenges associated with executive decision-making, offers the [QuantumPM](#) solution to these challenges, known as [BI Advantage](#), and provides examples of three real-world business problems solved using BI software.

What's the Right Data?

Every hour of every day, corporate leaders across the globe make decisions that impact the fiscal health of millions of employees and other key stakeholders – a heavy burden shared by the small set of leaders. These executives need the most accurate and up-to-the-minute data on which to base their weighty decisions. They depend on the efforts of business analysts to provide them with the best data available for this decision-making process. The process of collecting data from multiple “Source-of-Record” systems and analyzing it according to company-specific business rules and workflows results in reports, trending data, and other types of informational output. In corporate-speak, this output is commonly known as Business Intelligence (BI), the knowledge foundation upon which executive decisions are made.

The Data Warehouse

In its simplest form, the business analysts pull the data they need from various sources and then use a spreadsheet like Excel to manipulate the data into the needed reports and charts. The charts may end up in another Microsoft Office product like Word or PowerPoint. This process is repeated on a regular weekly or monthly basis. Unfortunately, these processes can take on a life of their own and the business analysts

who manage them spend hours pulling data and formatting reports with little time left over for effective analysis.

Alternatively, organizations pull their data from a data mart or data warehouse which allows them to adopt a set of techniques and technologies aimed at transforming raw data into meaningful information with more automation. Batches of operational data can be copied to a centralized pool of data designed to facilitate access and analysis. Queries can be run on the stored data without affecting the live data.

Most problematic in developing the data warehouse has been maintaining data quality. Because the source data can come from a wide range of Enterprise Resource Planning (ERP) software and other legacy systems, inconsistencies are inevitable. Over time, poor data quality can erode managers' confidence in the analysis, or worse, lead to faulty decision-making.

An alternative to corporate-wide data warehouses is a department-specific data mart, which may accelerate the process of getting information to managers for the purpose of better decision-making. They may also allow non-technical business leaders to drill-down to learn more, conducting their own analysis.

The development of Online Analytical Processing (OLAP) cubes provides a foundational shift in the evolution of BI. These allow managers to slice-and-dice a subset of data in a cube from lots of different angles. OLAP cubes offer the promise of identifying hidden data relationships and correlations, revealing previously veiled insights and actionable intelligence.

The arena of Business Intelligence now includes all of the above areas plus a wide-range of packaged business analytic applications targeted at particular user groups. Rather than working from company-wide data in a data warehouse, these off-the-shelf apps usually bundle an OLAP cube with a BI reporting tool and a dashboard.



Executive Decision-Making Evolves

As BI has evolved, the greatest challenge has been how to integrate data from different systems accumulated over many years. Traditionally, data flowed from “Source-of-Record” systems to data warehouses and then to data marts to be used for BI purposes.

Moreover, source data can also come from customer-facing applications, suppliers, and other external sources.

The solution to this data-integration dilemma may lie in [BIAdvantage](#), QuantumPM's new business intelligence software for corporate leaders seeking a business-rules driven, yet easily customized and affordable BI solution.

[BIAdvantage](#) is a cloud-based Software-as-a-Service (SaaS) solution that lets users collect and monitor only the data that is critical to making business decisions for their organization. **BIAdvantage** extracts essential information from key on-premise and cloud sources, provides the data to other applications, and creates actionable insights. Because users are able to capture accurate organizational information in a single BI platform they gain a better understanding of key business indicators. This means customer organizations are nimble, able to respond to an ever-changing market place.

BIAdvantage is not an out-of-the-box product that forces customers to utilize “canned” templates and report formats. It is a cloud-based rules engine that allows QuantumPM to build and customize information to meet an organization's specific requirements. The software provides for the continual improvement of organizational data by identifying problem areas and then feeding that information back into the organization, providing actionable opportunities to facilitate change.

Other more ridged BI software products only provide the data in linear output requiring more effort to impact results. Over time, **BIAdvantage** will help to improve business processes and communication within the organization, resulting in more in-depth and higher quality data for better decision-making.

Customer-specific business rules and workflows allow **BIAdvantage** to produce data outputs and trigger preemptive communications. These can include word documents, slide presentations, customized dashboards, emails, and texts. Modifications to the data can be made easily, making this a flexible and cost-effective way to gain solid business intelligence.



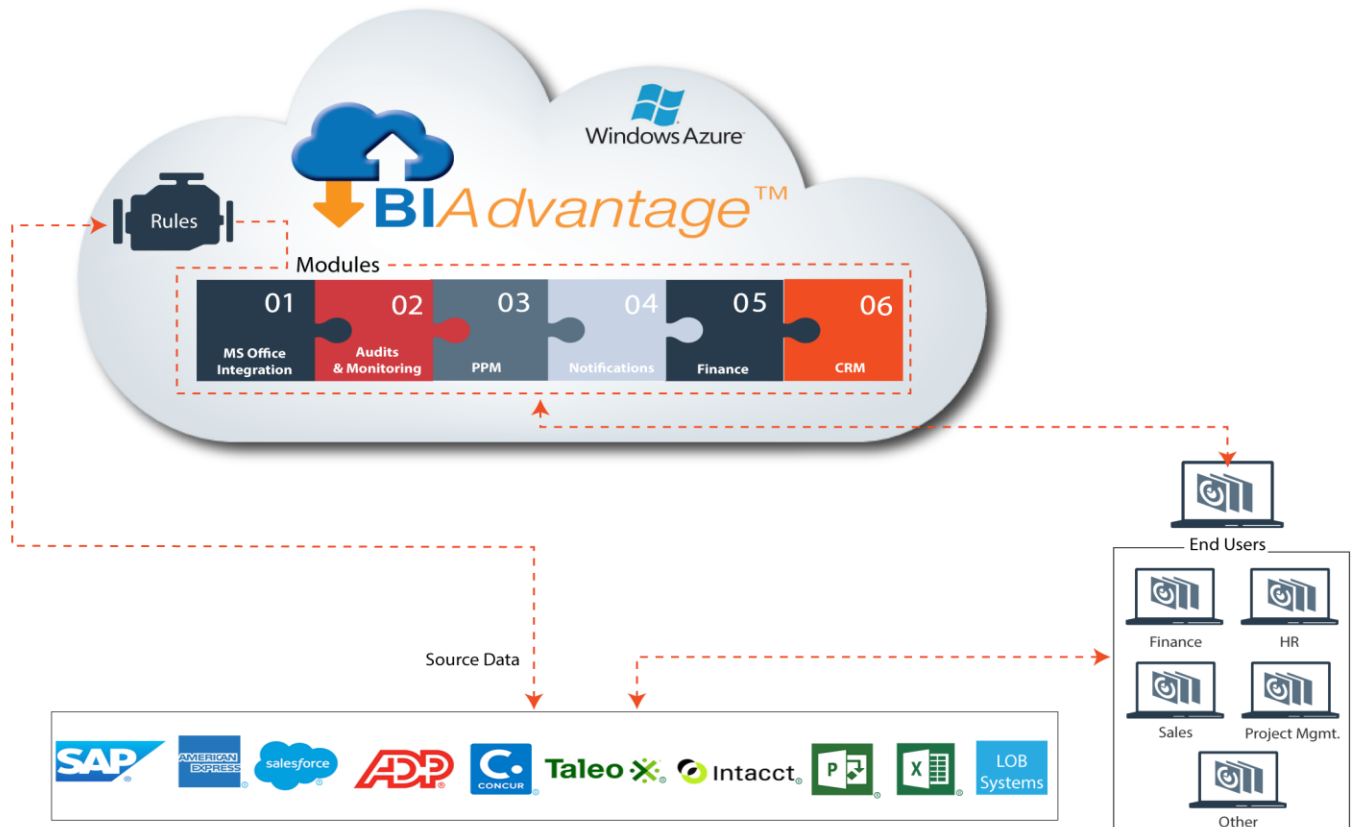
What's Under the Hood?

BIAdvantage was built to take advantage of the cloud and is offered as a Software as a Service (SaaS) Solution working in the Microsoft Azure Cloud. This means that the solution is able to take advantage of all of the security, redundancy, and encryption of the fastest growing cloud software in the world. It uses state-of-the-art technology and includes a Rules-Engine to monitor and manage services as specified by

each of our customers for their specific requirements.

Because **BIAdvantage** is built on the Microsoft platform, it is able to bring all of the components together into a seamless offering and can pull data from any line-of-business solutions regardless of whether they are cloud-based or on premise. It has the ability to transfer data between systems including: Microsoft SQL-based technologies such as CRM and Project, cloud solutions such as SalesForce.com, financial systems, ERP, and others.

Services available to each customer using **BIAdvantage** include the ability to monitor data using business rules for various situations, integrate data for any business need, produce trending data because of the ability to retain the data in Azure, and automation of intelligence notifications based on business rules or trends.



In addition to the ability to integrate data between systems, **BIAdvantage** has extensive capabilities for reporting and business intelligence. Because it is built on the Microsoft platform, it can automate any Microsoft Office reporting options (PowerPoint, Excel, Word, etc.) and can also use Power BI to provide value-added reporting and other services for customers. It can trigger dynamic communications to any user or user group and can generate full documents and reports, which can be delivered in different ways (emails, posting to a SharePoint location, make them available for download, etc.). Any report can include embedded information that is created using the Office365 products (tables, graphs, emails, etc.) as a result of analyzing the data from the system.

BIAdvantage extends all the information from these sources and puts them into a BI data model. It can send data to other systems, create reports, or perform ad-hoc queries against the unified data model(s). Once a data model is created, **BIAdvantage** helps the customer manipulate the data to create different types of output using the rules engine.

BIAdvantage provides faster, cheaper business intelligence that can help any business. Analytics from the system can be given directly to the people in the appropriate format so they can spend their time analyzing the data rather than pulling it and formatting it. If there are issues with missing or late data, notification can be sent directly to the individuals who can fix the problem. Every company has its own challenges in how it organizes and integrates data. **BIAdvantage** provides flexibility so businesses can organize and reorganize their data to get the output in the way they need it.

It Works. It Really Works.

Don't take our word for it! Take a look at three examples of customers that met their BI challenges using **BIAdvantage**:

Example 1

Challenge:

A large gas distribution company performed extensive analytics on its projects each week to determine their progress, use of resources, and future resource requirements. The analysis was in the form of reports used by senior leadership for portfolio oversight of major capital-intensive projects and determined the future spend and resource requirements for a 2-3 year look-ahead.

Before BIAdvantage:

Prior to using the **BIAdvantage** solution, this work required a minimum of 20 hours each week to pull the data from the numerous different sources, compile it, and review for accuracy. Once those steps were taken, the report was assembled for analysis. This process was repeated weekly.

After Implementing BIAdvantage:

QuantumPM worked with the team to establish the criteria and business rules for data selection from the various systems. The logic was modeled in **BIAdvantage** and tested in parallel with the manual process. Several errors in the manual process were identified during the testing process that had been actively used in decision-making processes. Once the new solution was certified, it went into production with no errors. It now takes

less than 15 minutes to create the same reports each week, giving senior managers the time they need to analyze the data rather than create the reports.

Example 2

Challenge:

A major beverage distributor was having trouble reconciling its vendor and internal personnel costs. The organization was using a weekly validation process that included submission of time from hundreds of personnel against various projects and operational activities.

Before BIAdvantage:

Prior to using the **BIAdvantage** solution, the weekly cycle was not uniformly adopted, was error-prone, and resulted in out-of-sync conditions with more than 30% of expected output. Two full-time staff members and a supervisor spent hours on the validation process, but were making little headway in reducing errors or improving the end result.

After Implementing BIAdvantage:

With **BIAdvantage**, the time-entry process is proactively monitored. All data submitted to the system is reviewed and validated for accuracy. If errors are identified, the individual time submitter and supervisor are immediately notified of the problem with suggestions on possible corrective action. If individual time-submitters do not provide their input in a timely manner, they and their supervisors are notified so that the delay is kept to a minimum. Additional analytics are provided at various levels of the organization regarding specific projects, work groups, and other categorizations as needed. The system is dynamic and can be modified with specific messages, individual messages, and timely analytics. Once the system was put into production, the errors in the system dropped from 30% to less than 5% within weeks. The system now monitors adoption, compliance, and performance without human intervention, and errors are corrected by the end-users within days instead of months.

Example 3

Challenge:

A professional services organization wanted to minimize the amount of overhead required to perform administrative activities so that the majority of its workforce was productively engaged in customer-focused, billable work. To accomplish this, the company implemented a cloud-only infrastructure for its technology needs. All work is performed using cloud-based systems for CRM, financial management, project management, office communications, and other business needs. The various systems

required to accomplish all of this work rely on entry of similar data to manage customers, manage contracts, track progress, invoice, etc.

Before BI Advantage:

Prior to using the **BI Advantage** solution, the customer was required to enter the same (or similar) data into each of the various systems in the format expected by that system. This process was tedious, error-prone, and made it difficult to see a full end-to-end picture of what was going on without a great deal of time and effort.

After Implementing BI Advantage:

With **BI Advantage**, each system has been identified as the “System-of-Record” for specific data components. **BI Advantage** pulls data from the various systems and provides it to other systems as appropriate for the task at hand. The system monitors activities and events so that the data is available at the proper entity when it is needed. This saves time, improves accuracy, and results in an overall reduction in costs because it automates the movement of data and streamlines the work of the organization.



Business Intelligence in the Cloud

As a SaaS offering, [BI Advantage](#) runs on the Microsoft Azure Cloud and is a hub for extracting data from a “Source-of-Record” system, analyzing it, and combine it with data from other systems, such as Microsoft Project, SharePoint, Office 365, Salesforce, and SAP. Automated analyses of the data are

performed in a secure cloud. The resulting output, or business intelligence, can be delivered in ways useful to each customer such as reports, emails, and automatic notifications. The system is built in the cloud to simplify the work our customers need to do.

Advantages of cloud services include:

- Cut down on internal IT infrastructure costs with SaaS
- The cost is lower, which typically makes cloud services an operational expense versus a capital investment
- Cloud services are easier and faster to manage because users don't have to update and maintain multiple servers

- Automated updates and new functionality, such as new features and improvements, are rolled out automatically without the need to purchase any extra licenses or services.
- Since data resides in the cloud, it is easier to proactively monitor business and support data to identify issues and make timely corrections

The Last Word

In summary, [BIAdvantage](#) is a new approach to business intelligence and executive decision-making. It lets users select the key data points they need to analyze from cloud or on-premise “Source-of-Record” systems, combine and evaluate the data using company-specific business rules and workflows, monitor and modify the data so executives see only the data they need to see, and output the results in ways that make sense for each organization. As a cloud-based solution, **BIAdvantage** provides for a lower total cost-of-ownership by reducing the reliance on internal IT resources, eliminating hardware and upgrade costs, and allowing for rapid deployments and upgrades.

Benefits of BIAdvantage include:

- Delivers reliability, security and enterprise-level performance with the economy of Software-as-a-Service (SaaS)
- Pay a small monthly subscription fee versus purchasing servers and licenses
- Provides better visibility and accounting of company data
- Saves time, money and reduces human errors by not having to re-enter data into multiple systems
- Identifies data problems early so mitigation efforts can be put in place before they reach crisis status
- Merges information from multiple systems over time to provide trending data
- Enhances data quality and minimizes disruptions in an organization
- Delivers robust reporting capabilities using actual data from multiple “Source-of-Record” systems
- Reports can be created and delivered in numerous customer-specified formats (slide presentations, word documents, spreadsheets, etc.) or can be browser-based and hosted entirely in the cloud
- Improves communication and provides better control of organizational resources
- Automatically sends preemptive notifications to computers or mobile devices
- BI output is customizable to specific business rules and specific business needs

For more information or to speak with a representative about what BIAdvantage can do for your organization, drop us an email at sales@quantumpm.com or 303-669-2334

