

Top Six Worst Practices in Business Intelligence

How to Avoid Failure and Ensure BI Success

A White Paper

WebFOCUS iWay Software Omni

Table of Contents

1	Introduction
2	Worst Practice 1: Buying What Analysts Want Without Considering Other Users
4	Worst Practice 2: Buying New Data Discovery Tools Without Changing the Excel Mindset
6	Worst Practice 3: Making a BI Purchasing Decision Based on One Hot Feature
8	Worst Practice 4: Lack of a Concrete Data Quality Strategy
10	Worst Practice 5: Not Considering Mobile Users in Your BI Strategy
12	Worst Practice 6: Ignoring New Data, New Sources, and New Compliance Requirements
14	Conclusion

Introduction

The majority of business intelligence (BI) implementations don't deliver the anticipated results. In fact, BI projects fail at an astonishingly high rate – between 70 percent and 80 percent, according to Gartner.¹

Companies of all sizes suffer from countless oversights and poor judgment calls during planning, tool selection, and rollout – mistakes that can be detrimental to BI success. Even the smartest, best-run businesses in the world commit the common missteps that doom BI projects for failure.

The list below, culled through the real-world experiences of Information Builders' BI experts, comprises what we consider to be the six worst practices leading to poor results in BI deployments:

1. Buying what analysts want without considering the needs of other users
2. Deploying new BI tools without changing the Excel mindset into a BI platform mindset
3. Making a BI purchasing decision based on one hot feature, or buying a feature list rather than laying the foundation for a comprehensive BI strategy
4. Lack of a concrete data quality strategy or treating data quality as an afterthought
5. Not taking a "mobile-first" approach, or not considering the needs of mobile BI users
6. Ignoring new data, new sources, and new compliance requirements

This white paper discusses these six worst practices in business intelligence, and serves as a guide for avoiding them. You'll learn from the mistakes of others to ensure a successful BI implementation in your own organization.

¹ Goodwin, Bill. "Poor Communication to Blame for Business Intelligence Failure, Says Gartner," Computer Weekly.com, January 2011.

Worst Practice 1: Buying What Analysts Want Without Considering Other Users

Business users, customers, and partners need information too.

Most companies make business intelligence (BI) purchasing decisions based on input from just one group of users – the business analysts. This single perspective, however, creates many problems.

Analysts select tools that they are already familiar with, or ones that are similar to those they have used in past. This severely limits broad BI adoption across an organization, and minimizes ROI. Because analyst-chosen tools are heavily biased towards their own skills and needs, they are way too complex for the average business user. The majority of users within an organization require extensive assistance from either the analysts themselves, or IT staff, in order to access and interact with enterprise information.

Perhaps this is why, since 2009, BI usage rates have remained flat at around 25 percent. BI Scorecard's Cindi Howson says that close to 80 percent of employees who make decisions still "lack the tools to make them on facts, relying instead on static spreadsheets or gut feel."²

Ease of use is a critical success factor for BI, but what is intuitive for one type of user may be complicated for another. Tools are for professionals, not for typical information consumers. Business users don't need tools; they need different, more intuitive approaches to analysis. Companies that implement only on a handful of core tools that offer many powerful analytical functions through sophisticated interfaces – the tools that the analysts want – will alienate a large portion of their BI audience.

The Solution

Empowering different types of information consumers with different analytical tools is the key to BI pervasiveness, and ultimately BI success. Extending BI and analytics to all users – particularly frontline and operational employees, customers, and business partners – promotes better decision-making enterprise-wide and aligns operations to strategic and growth goals.

The most successful BI strategies take all information needs into account, and ensure that supporting solutions satisfy the requirements of not only the analysts and power users, but also many different kinds of information consumers at the strategic, tactical, and operational levels. The selection committee should include business users as well as analysts to ensure that all users can embrace the chosen solution, regardless of their skill set or technical savvy.

²Howson, Cindi. "Despite Successes, BI Adoption Is Flat," InformationWeek, November 2011.

The WebFOCUS BI platform allows executives, managers, operational employees, and even customers and business partners to take advantage of advanced, yet intuitive BI functionality. With WebFOCUS, organizations can efficiently build and deploy user-friendly managed and self-service analytical environments, as well as targeted and highly interactive InfoApps™ that answer specific business questions or solve certain business problems. Business users inside and outside the enterprise are freed from IT dependence, and empowered to self-sufficiently satisfy their own analysis needs. More sophisticated functionality allows analysts and other power users to conduct deeper, more complex types of analysis.

The WebFOCUS BI Portal enables the design and deployment of next-generation BI dashboards. Business users can custom-tailor their own information environments to best suit their needs. They can select the mix of content to be displayed on their dashboard pages, and share those pages with other users – all via their device of choice, whether it's a desktop, laptop, smartphone, or tablet.

Furthermore, WebFOCUS makes advanced capabilities accessible to a much wider user base. Predictive analytics, data visualization, and other types of innovative analytical features are so simple and intuitive that everyone – even non-technical business users – can interact with data in new and exciting ways to generate forecasts, uncover patterns and trends, and dig deeper into the relationships that exist in enterprise data.

Worst Practice 2: Buying New Data Discovery Tools Without Changing the Excel Mindset

Transform your organization to a BI platform mindset.

Many companies rely on Microsoft Excel to facilitate the analysis and sharing of vital business information. The problems with this approach are well known: multiple versions of the truth caused by limited version control, lack of auditing ability, and high error rates and data quality problems. These issues negatively impact planning and decision-making, and the damage increases as disparate and conflicting spreadsheets circulate throughout an organization.

Few realize, however, that the slick new data discovery tools they've implemented to supplement those spreadsheets are nothing more than prettier versions of Excel. These products may enhance the visual appeal of the information being analyzed, but they still create the risk of inconsistent insight and flawed decisions. Like Excel, they lack version control and auditing ability, and have no way to ensure data integrity. Users have their own data sets and their own means of manipulating information, so they'll arrive at different conclusions even though they use the same tools.

The most successful BI environments keep people connected and ensure a single, consistent view of enterprise information – even if they use different features and capabilities to perform their analyses.

The Solution

Companies need to move away from the Excel mindset, and implement a broad-reaching BI platform with a wide array of functionality. This eliminates the drawbacks of Excel and data discovery tools, while letting users conduct analyses and manipulate data the way they want to. Whether they want spreadsheets, sophisticated visualizations, or pre-built BI apps that provide direct answers to specific business questions, a comprehensive BI platform will satisfy everyone's needs, while preserving integrity, consistency, and auditing ability.

WebFOCUS delivers a broad range of features and capabilities, so the right tools are available to all the right professionals:

- Dashboards and scorecards for executives and managers
- Self-service BI and InfoApps – targeted, interactive BI apps that answer specific business questions – for non-technical operational workers
- Report development, ad hoc reporting, and other functionality for analysts and power users

WebFOCUS Visual Discovery also provides deep, sophisticated analysis of any enterprise data. Users can display information in scatterplots, 3D bar and pie charts, histograms, data constellations, multiscapes, and other cutting-edge visualizations. They can perform in-depth, intuitive analysis in real time without the need for disconnected data discovery tools.

WebFOCUS also offers flexible formatting options. Users who prefer to work with spreadsheets can output their reports in Excel for further manipulation. However, unlike Excel, where spreadsheets reside on individual user desktops, all WebFOCUS content is stored in a central database to ensure optimum control and security.

Worst Practice 3: Making a BI Purchasing Decision Based on One Hot Feature

Don't buy a feature list – lay the foundation for a comprehensive BI strategy.

Companies often purchase a BI tool as a knee-jerk reaction to very specific, very narrow demands. A functional user insists on a certain feature to make her job a bit easier. A business manager wants a new analytical capability to solve a specific problem. An executive reads about new functionality and pushes for its purchase simply because it's "cool". These are typical scenarios, where one user or user group hijacks the entire evaluation process.

This tunnel vision is harmful to any business intelligence strategy. When BI efforts focus on just one requirement, broader-reaching analysis needs or future requirements are left out of the planning and solution-selection process. As needs change and grow, or as new requirements emerge, organizations struggle to evolve and expand the BI environment accordingly. They'll purchase a series of disparate tools to address one need at a time, creating BI silos throughout the enterprise and driving up total cost of ownership. They'll also frequently ignore the back-end information infrastructure to deliver the needed feature as quickly as possible, leading to a long-term maintenance nightmare.

Additionally, once they learn more about the selected tool, users who focused on a single feature in the first place often find the tool insufficient to address their higher-level needs. They go back to IT with demands for new tools, and the process starts all over again.

The Solution

According to Wayne Eckerson, director of BI Leadership Research, some tools "satisfy the parochial needs of individual workgroups or departments, while BI suites provide an integrated experience and architecture that addresses the entire spectrum of BI needs in an organization and is thus easier to administer."³

The most effective and economical approach is to choose a flexible and extensible platform with a broad range of capabilities. Companies can deploy the most urgent features and functions right away – the dashboard that users say they can't live without, or the customer-facing BI environment that will keep clients from defecting to a competitor – and then easily add predictive analytics, data visualization, enterprise search, or other advanced capabilities as new needs arise.

³ Eckerson, Wayne. "Self-Service BI Tips," BeyeNetwork, September 2013.

Even if the BI platform lacks the hot, new feature, the vendor will most likely add it soon. On the other hand, the vendor of the “popular” feature won’t be able to quickly catch up on all the other capabilities that are already missing from their tool.

The platform approach addresses immediate requirements, while future-proofing the BI strategy. It also avoids the selection bias highlighted in the previous worst practice, by meeting the needs of all present and future stakeholders – not just those who make the most noise to get what they want.

WebFOCUS is a single, fully integrated BI platform that seamlessly covers all analysis needs. From BI and advanced business analytics to performance management, WebFOCUS gives organizations everything they need to leverage information assets more efficiently and effectively. With its broad array of innovative capabilities, WebFOCUS transforms how users access, interact with, and consume information for their strategic, operational, and personal needs.

WebFOCUS offers an economical, modular approach to BI implementation. It can be rapidly deployed to address pressing analysis needs, and then easily expanded with innovative features such as:

- **WebFOCUS ReportCaster**, for dynamic scheduling, distribution, and storage of BI content
- **WebFOCUS RStat**, an innovative predictive analytics solution that leverages historical data to forecast future events and outcomes
- **WebFOCUS Mobile**, to make BI content readily available to any smartphone or tablet
- **WebFOCUS Magnify**, a robust enterprise search app that makes it easy to locate any structured or unstructured data
- **WebFOCUS Visual Discovery**, an in-memory analytics solution with cutting-edge data visualization capabilities
- **WebFOCUS Social Media Analytics**, to enable the collection and analysis of real-time sentiment from Facebook, Twitter, and other unstructured data sources

WebFOCUS is also highly scalable. New users can be added easily to the environment, without purchasing and installing extensive hardware and infrastructure. With this scalability and flexibility, organizations can quickly adapt their BI environment as their needs and requirements change down the road.

Worst Practice 4: Lack of a Concrete Data Quality Strategy

Don't treat data quality as an afterthought.

Most organizations want to give their analysts new business intelligence tools as quickly as possible. Yet, in their rush to rapidly implement and roll out bigger and better BI capabilities, they fail to consider the integrity of the information sources with which those analysts work. They either overlook data quality needs completely, or address potential data quality problems at a later time.

This oversight creates monumental problems. Sound business decisions depend upon optimum data accuracy, consistency, timeliness, and completeness. Data integrity is even more important when you deploy advanced analytics. One bad record can dramatically change a conclusion, forecast, or estimate.

Most companies don't embark on a data quality initiative until after things have gone horribly wrong. A BI solution will only succeed if the underlying data can be trusted. Lack of a solid data quality management plan as part of a BI initiative will lead to poor results, and may actually do more harm than good.

Advanced analytics and BI tools are quite reliant on the "strong fundamentals of data capture, cleansing and governance." According to a recently published Aberdeen research brief, best-in-class companies are three times more likely to adopt data quality tools, a decision that directly correlates with "increased performance in data analysis, employee efficiency, and the speed and accuracy of business decisions."⁴

The Solution

Many companies correct their data integrity problems by cleansing data as it is loaded into a data warehouse, data mart, or other repository, but this approach won't tackle quality problems at their source. Corrected data is never reconciled with back-end systems, which means quality problems will still exist in real-time operational analytical scenarios.

A comprehensive data quality management solution, embedded directly into the BI environment, will ensure optimum integrity across all enterprise information assets. Only Information Builders offers a common, unified platform to simultaneously address both intelligence and integrity needs.

⁴ Rowe, Nathaniel. "It All Begins with Data Quality: Building the Foundation for Business Intelligence," Aberdeen Group, June 2013.

iWay integrity solutions from Information Builders enhance the accuracy and consistency of enterprise information throughout its lifecycle. Organizations can eliminate the pitfalls associated with poor data quality, and guarantee that the data users rely on for analysis is correct and complete at all times.

From profiling, standardization, and validation through unification, cleansing, enrichment, and ongoing data governance, the iWay Data Quality Suite provides a broad-reaching, high-performance environment that enables truly proactive data quality management. Organizations can create a real-time data quality firewall that not only locates and rectifies invalid or corrupt information in enterprise systems, but also stops it from entering the environment in the first place.

iWay also features comprehensive master data management functionality to foster consistency and uniformity across all enterprise assets. With the iWay Master Data Suite, organizations can create and maintain a single view of their core business entities, such as products, customers, employees, and vendors.

Worst Practice 5: Not Considering Mobile Users in Your BI Strategy

Take a mobile-first approach to business intelligence.

Mobile First is an emerging development practice that eliminates the problems and issues that occur when IT teams slap a mobile interface onto sophisticated, graphics-heavy websites that were originally developed for desktop formats. In light of the growth trend in mobile consumption – people are now using smartphones more often than laptops – companies must consider the Mobile First approach for their BI applications. If they fail to address the needs of mobile BI consumers, they'll experience low levels of BI adoption, and ultimately, diminished returns on BI investment.

The needs of mobile users cannot be an afterthought. They must be addressed as plans are being laid out. For example, organizations must take into account smaller screen sizes, bandwidth and connectivity constraints, and consumer-style expectations for ease of use and an engaging and interactive experience. Multiple devices must also be supported to drive BI pervasiveness. Users must be able to access BI content via their smartphone or tablet of choice. A BI solution that forces organizations to build native apps for each type of device in use will drain time, resources, and money.

The Solution

Don't ignore the needs of mobile users, or design a BI application for PC users and simply adjust it for mobile access. Organizations must ensure that all BI content is mobile-optimized. They must meet the demands of mobile BI consumers first, and then expand that mobile content to be incorporated into portals, dashboards, and other PC-based BI environments.

The key is to determine which mobile apps will have the greatest impact or generate the most revenue, and develop those first. With the right BI platform in place – one that is truly device-agnostic – organizations can even let users choose which content they want to see on their mobile device, effectively using “crowd-sourcing” to determine priorities.

The concept of Mobile First can be successfully applied to BI implementations with WebFOCUS Mobile. This innovative BI platform blends native device functions with standard web capabilities to deliver a hybrid approach to mobile BI. The result is the rapid creation of highly interactive, device-independent solutions that ensure fast time-to-value.

WebFOCUS Mobile optimizes the mobile BI experience, providing a variety of approaches to satisfy different roles and requirements. From disconnected analytics and portals for organizing and sharing content, to real-time alerts, WebFOCUS Mobile ensures that information is delivered to mobile devices when and how users want it.

WebFOCUS Mobile features:

- **WebFOCUS Active Technologies**, a special type of web app that combines data, charting, and interactive analytic capabilities into a single document that can be e-mailed and saved offline
- **WebFOCUS Mobile Faves**, a native mobile app that imbues web apps with an enhanced user experience. Users gain a natural and native interface to the same BI content available in a device browser, but with the device-specific navigation paradigms and gestures they are already comfortable and familiar with – available on iOS and Android
- **WebFOCUS Maintain**, a web app that provides transaction services that allow write-back applications to be created and intermixed with traditional BI applications

These features can be used to build and deploy InfoApps – visually compelling, highly interactive BI apps that are focused on specific business questions or issues. InfoApps are as simple and intuitive as consumer apps, and provide users with a consumer-like experience for accessing BI content.

InfoApps are highly interactive, visually compelling, and easy-to-use BI apps that provide employees, partners, customers, and other non-technical stakeholders with answers to specific business questions or address certain business problems.

InfoApps are ideal for mobile BI because they are extremely straightforward and easy to use. Users can begin working immediately, with no training required. InfoApps work seamlessly on any device – and can be used in online or offline mode.

InfoApps can also be easily rolled out to PC users. They are extremely scalable, and can be deployed to an almost unlimited number of users, without the need for extensive long-term maintenance or IT involvement. InfoApps can be incorporated quickly into BI portals and dashboards, customer-facing BI applications, and even automated processes and workflows.

Worst Practice 6: Ignoring New Data, New Sources, and New Compliance Requirements

Data access and integration is critical.

Today's businesses operate in a new world order, one that involves rapidly growing volumes of data generated during increasingly complex transactions. Big data must be properly harnessed to drive business performance and ensure adherence to constantly changing regulatory guidelines.

New sources of information are also coming to light. Social media sites, blogs, e-mail messages, and other communication vehicles contain a wealth of vital, real-time business insight that can't be obtained through surveys, focus groups, and other traditional forms of sentiment collection and opinion gathering. Companies can stay one step ahead by finding new ways to tap into these types of unstructured data and leverage it for competitive advantage.

But few BI platforms easily adapt to emerging requirements like these. For example, many BI solutions don't scale, or require huge proprietary hardware appliances to support analysis against large data volumes. Some lack the ability to incorporate unstructured information into the environment or can't retrieve data from important new sources like Facebook, blogs, and Twitter. And others can't reconcile information across diverse infrastructures and big data environments to create a single, consistent view of key business information.

Partnering with the wrong vendor will hinder insight for decision-making purposes, and provide an incomplete picture of the state of the business. Organizations that choose a BI platform that can access all the information available to them – no matter how much of it there is, or where it comes from – will achieve true BI success.

The Solution

Social media is the hot new data source. Organizations must seamlessly collect this data, and reconcile it with other enterprise assets. Furthermore, columnar databases and storage facilities for big data, like Hadoop, didn't exist five years ago but are critical now. A BI vendor must not only provide these capabilities, but also ensure they are fully integrated into the environment in a cohesive way.

Information Builders meets these requirements with its powerful feature set:

- **iWay integration solutions**, which unify more than 300 information assets to support key operational and analytical needs. Organizations can tap into big data and new information sources, such as Facebook and Twitter, to optimize core activities and empower real-time decision-making for a competitive edge

- **WebFOCUS Hyperstage**, an embedded, column-oriented data store and Knowledge Grid that allows organizations to dramatically improve the performance of their BI applications, even in big data scenarios, by creating a self-managing environment that is optimized for analytics – without the need to build and maintain indexes; partition data; or perform manual tuning
- **WebFOCUS Magnify**, an enterprise search app that makes any structured or unstructured data easy to index and search, regardless of its source or location. Users can leverage a familiar and intuitive Google-like interface to instantly access detailed records, unstructured documents, aggregate summaries, and more
- **Social media integration and analytics** solutions enable data to be collected directly from Facebook, Twitter, and other sites, and leveraged to positively influence sales and marketing, customer service, product development, and other important operations
- **WebFOCUS Performance Management Framework** creates a culture of accountability and compliance by providing formal measurements of achievement towards strategic goals, and enhancing visibility into the effectiveness of key operations
- **iWay Master Data Suite**, a powerful master data management solution that consolidates millions of records to make unified and validated master data instantly available to a wide range of enterprise sources

Conclusion

Some of the worst practices mentioned in this paper may seem like common sense. However, high BI failure rates demonstrate that these worst practices are, indeed, put into effect more frequently than you might think. When trade journalists, vendors, and industry consultants are constantly promoting the “latest and greatest” technology and all its benefits, it’s easy to get caught up in the hype.

But now that you are aware of these six worst practices, you can prevent them from standing in the way of BI success in your organization. You’ll make the right choices, with the right goals in mind, to lay the groundwork for widespread user adoption and rapid, measurable return from your business intelligence investment.

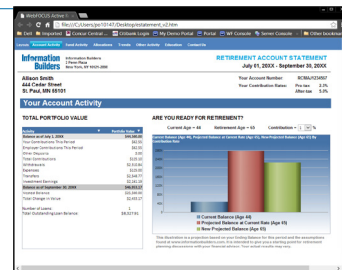
WebFOCUS offers everything you need to avoid these and other BI worst practices:

- A broad range of intuitive features to address the information needs of not only analysts and power users, but non-technical business users as well
- Powerful functionality that meets the widest array of sophisticated analytical needs, while avoiding the pitfalls of Excel and disconnected data discovery tools
- A modular architecture that satisfies your immediate needs, and allows you to build on your environment by adding new capabilities and new users as requirements evolve
- Embedded data quality and master data management tools to ensure the ongoing integrity of the information used in analysis
- Powerful mobile features that make interactive analytical capabilities readily available to smartphone and tablet users
- A flexible and scalable infrastructure that can easily adapt as data volumes grow, new information sources emerge, and regulatory requirements change

Most importantly, Information Builders solutions help organizations move away from the “tools” approach to broader BI analytics strategies that satisfy all users. From a comprehensive, fully unified business intelligence, data integrity, and integration platform that provides features and capabilities to address current and future needs, to InfoApps, which bring the popular apps paradigm to BI environments, Information Builders allows every organization to take the kind of user-focused approach that ensures BI success.

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