

SEVEN STEPS TO FLAWLESS BUSINESS INTELLIGENCE

A COGNOS WHITE PAPER



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ABOUT THIS PAPER

In 2005, Gartner published a paper entitled “Avoid the Five ‘Fatal Flaws’ of Business Intelligence and Corporate Performance Management.” The paper describes Gartner’s observations as to why business intelligence (BI) initiatives fail or get off to a bad start. The findings were based on Gartner’s expertise in the BI industry and research into real-world deployments.

This paper explains how the newest offering from Cognos—Cognos 8 Business Intelligence—can help organizations avoid these “Fatal Flaws.” The Cognos Views are not intended to be exhaustive; rather, they are intended to act as an introduction to Cognos 8 BI and a catalyst for further reading. The Appendix contains a list of suggested Cognos White Papers that address the Cognos 8 BI and its role in avoiding the “Fatal Flaws” in more detail.

ABOUT THE SOURCE

Unless otherwise stated, all citations are from the document, “Avoid the Five ‘Fatal Flaws’ of Business Intelligence and Corporate Performance Management,” by Bill Hostmann, Frank Buytendijk, and Ted Friedman, Gartner, 2005.

You can access the Gartner paper here:
www.cognos.com/c8demo-gartner

INTRODUCTION

BI capabilities—reporting, analysis, ad hoc query, event lifecycle management, and data integration—transform vast amounts of data into relevant, targeted, and timely information that business people rely on to make decisions and manage performance.

Most organizations have some form of BI and most CIOs are familiar with its benefits. Among these are:

- increased efficiency in information delivery at lower costs;
- visibility into performance for greater agility; and,
- accurate, consistent information for better business decisions.

Business intelligence (BI) initiatives present complex challenges, says Gartner. When implemented correctly, in conjunction with a well-executed strategy that is aligned across business units, they offer insights that can drive positive business changes. When BI initiatives fail, says Gartner, they often result in elaborate, costly, time-consuming implementations that no one uses.

Gartner says several factors have combined to make BI a critical part of organizations' preparations for economic improvement and a renewed focus on growth, including:

- The risks associated with failing to comply with government regulations for reporting.
- The competitive disadvantage to late adopters as BI becomes more widely used through various industries.
- The pressure to maximize efficiency from current resources.

COGNOS 8 BUSINESS INTELLIGENCE: ONE PRODUCT FOR BI

In 2003, Cognos introduced new reporting software, Cognos ReportNet™, built on a Web Services architecture. The open, modern architecture of Cognos ReportNet was its key innovation, and key to its value for both business users and IT. Cognos ReportNet bridges the worlds of pixel-perfect production reporting and highly flexible business reporting. It promises and delivers a single product for all reporting requirements, with simplified deployment, maintenance, and integration; drag-and-drop ease of use; multilingual reporting; and many other innovations.

Cognos ReportNet is phenomenally successful; it addresses the pent-up demand among customers looking for a single reporting product to meet all of their reporting needs. Because of this, many organizations have selected Cognos ReportNet as their reporting standard.

The promise of such a future platform was appealing. With a unifying architecture for all business intelligence capabilities, an organization could choose one product to bring together its previously separate capabilities of reporting, analysis, dashboards, scorecarding, and more. This single BI product would not only provide more value for less resources, it would be an obvious choice for business intelligence standardization.

Many technology companies claim this is what they deliver. Typically, however, they are offering integrated components that may share some services, or a common portal in front of disparate products, or basic-level interoperability among a mix and match of quite separate products (often the result of various acquisitions).

In contrast, Cognos has fulfilled the promise. It is offering one product with all BI capabilities, on a single, modern architecture.

This is Cognos 8 Business Intelligence.

Cognos 8 Business Intelligence takes the strength of the ReportNet platform and delivers a single, Web Services architecture for *all* business intelligence capabilities.

Cognos 8 Business Intelligence offers reporting, query, and analysis; dashboards and scorecarding; event lifecycle management; and the unifying power of centralized metadata in one product, on a single, proven services-oriented architecture. Cognos 8 BI delivers all of these capabilities through a 100 percent, zero-footprint Web browser interface for all users.

Business intelligence should not limit people's choice of how to access and interact with information in order to make their best decisions.

The promise of business intelligence is all users accessing all of their data, in any way they want, to understand what is happening, why, and determine what actions they should take to help the organization succeed.

This is the Cognos vision for business intelligence. This vision is made possible with Cognos 8 BI—making BI simple with complete capabilities delivered on a proven architecture.

FATAL FLAW NO. 1:

“IF WE BUILD IT, THEY WILL COME.”

What if you built a data warehouse and no one used it? This “fatal flaw” sees IT building a data warehouse in advance of understanding business user needs and without business user input. Having built the warehouse to deliver crucial business data, IT believes its value will be self-evident and that users will flock to it for the information they need.

Unfortunately, says Gartner, this hasn’t happened yet. Though IT’s efforts spring from the best of intentions, the data warehouse fails to attract users or generate ROI. There are many reasons: it may have a complex user interface; it may present data in a way that is unfamiliar to business users; or it may not offer the appropriate capabilities—all flaws that stem from acting in advance of understanding the needs of business users.

The Gartner Cure

- A successful initiative combines business relevance with strong architecture.
- Pose these questions: Is the data garnered appropriate for business users? It is correct and precise? Are answers and insights available when needed?
- Establish a BI Competency Center (BICC) to drive adoption of BI in the business, as well as to gather the business, technology and communication skills required for successful BI initiatives.

The Cognos View

Most BI software targets the professional author, or “power user.” This group accounts for a mere five percent of the employees in a typical organization. For BI to be a catalyst for better performance, organizations must engage the remaining 90 percent. This is a diverse group that includes casual business users, managers, and executives. All of these users need to make decisions. However, the rich functionality and interactivity provided by most BI applications often proves overwhelming.

Most casual users need little of this interactivity. Instead, they need easy access to regularly distributed reports and

other BI content. Rather than force casual users to struggle with complex data hierarchies, BI should use simple business terms and present information clearly. This helps users understand what is happening within their sphere of responsibility and make the right decisions.

Business managers have a wider range of responsibilities that demand a wider range of capabilities: reports that provide drill-through to detail and context; basic reporting, and occasional ad hoc queries and analysis. Executives need an at-a-glance awareness of organizational performance; drill-through to regular updates and status reports, and secure access to BI across a wide range of devices.

BI deployments must target the 90 percent of business users who are currently under-served by most applications.

Cognos 8 Business Intelligence provides a single BI environment that can address all of these user needs. Casual business receive regularly scheduled and pre-formatted reports that provide only the information they need and present it in their working language. Business managers can author basic reports and queries using drag-and-drop functionality. Executives can view interactive dashboards and scorecards and subscribe to alerts that notify them of key events.

Serving all users from a single product helps an organization increase its alignment with strategy and coordinate its response to changing business conditions for better results. People are aware of events as they are happening and can take the appropriate actions. As a BI standard, Cognos 8 BI acts as a central source of consistent information for the entire organization. Consistent information leads to people collaborating more effectively and making decisions with more confidence.

FATAL FLAW NO. 2:

“MANAGERS NEED TO ‘DANCE WITH’ THE NUMBERS.”

The advent of the browser-based interface has made business intelligence applications increasingly easy for people outside of IT to understand and use. However, many business users still favor spreadsheets over BI. To some extent this is understandable: spreadsheets are everywhere and easy to use. Yet there are risks involved in using them as BI applications or for planning and budgeting.

No manager is an island; and such “dancing with the numbers” inevitably causes problems further up in the organization. Making “tweaks” to calculations or definitions—however minor or well-intentioned—costs time elsewhere when results are consolidated into quarterly reports. Conflicting information leads to people making poor decisions or acting contrary to strategic goals. More seriously, organizations that operate with multiple versions of the truth risk violating Sarbanes-Oxley and other compliance legislation.

The Gartner Cure

- Use compliance regulations, such as the Sarbanes-Oxley Act, as an opportunity to educate business users about the risks posed by the widespread use of spreadsheets, proliferating data silos and unclear ownership of performance data.
- Remind users that “multiple versions of the truth” could open up the company to charges of data manipulation, information hoarding and data filtering.
- Forbid the use of spreadsheets for formal reporting and management meetings.

The Cognos View

Spreadsheets are inherently uncontrollable. They offer no reliable audit trail and lack both referential integrity and data integrity. Inadequate security features rarely restrict unauthorized access. Use of them encourages “islands of information,” which undermines the promise

of business intelligence. However, the demands of compliance can help an organization realize that promise.

Innovative Finance professionals see SOX compliance as a catalyst to modernize inefficient processes.

Research commissioned by Cognos shows that many forward-looking Finance professionals see SOX compliance as a catalyst to improve its partnership with IT. Through smart investments, organizations can expose, update, and modernize long-established but inefficient processes.

Now is the opportunity for real change. Before Sarbanes-Oxley, it was hard to find the economic justification for making these changes. To regain efficiency lost in an environment with more formal controls, organizations must not just automate inefficient processes, but overhaul them instead. Failure to do so is more than simply inefficient. It represents a control risk to organizations if its compliance efforts are overwhelmed with so many controls to account for bad processes.

Cognos 8 Business Intelligence integrates with Cognos Planning, a complete and purpose-built solution for planning, budgeting, and forecasting. Rather than force organizations to manage compliance and performance systems separately, Cognos provides the opportunity to manage both systems using a single and fully integrated approach. This lets organizations establish a unified view of both their compliance and performance processes and establish greater control over all of the underlying data. Finance gains the added advantage of using full BI capabilities against planning and budgeting data to identify opportunities and analyze trends. A single, purpose-built solution is also easier to use, which encourages people to abandon spreadsheets or use them to solve problems that they weren’t designed to solve.

FATAL FLAW NO. 3:

“WE DON’T HAVE A DATA QUALITY PROBLEM.”

Bad decisions, made in isolation, are not likely to bring a company down. Bad decisions, made at key points in a business process, every day, however, are a serious problem. The former may bring about acute, short-term pain. The latter, however, erodes corporate performance as the effects of one bad decision are compounded over and over as they cross departments or move further up the ranks.

BI must draw on accurate data. Otherwise the adage remains: “Garbage in, garbage out.” If an enterprise BI application is built on the wrong data, or on out-of-date or incomplete data, the value of the system is compromised long before information reaches the business user.

The demands of compliance have led organizations to pay closer attention to their data quality. However, few IT departments treat data quality as an ongoing concern that must be addressed in a systemic way.

The Gartner Cure

- Business leaders must be made aware of the unexpected and sometimes disastrous effects that poor data quality can have on business results and key strategic initiatives.
- Establish a data quality “firewall” ... to recognize data quality issues in incoming data and block low-quality data from entering your data warehouse.
- Implement a process at the back end for auditing and verifying the data.

The Cognos View

The solution to disparate data sources is to standardize business intelligence on a solution that supports an open data strategy and that uses a common metadata model. The foundation for BI standardization is data integration. While the drivers and sources of data have changed rapidly, one thing remains constant: getting the data right, and making sure that the right data assets are in place.

Cognos 8 Business Intelligence provides access to heterogeneous data and data integration through direct access, Enterprise Information Integration (EII), and Extract, Transform, and Load (ETL) capabilities. It also provides a common metadata model that ensures consistent business rules, dimensions, and calculations across all sources and all BI capabilities. Together, these features provide IT with the tools they need to ensure data integrity across user groups, BI capabilities, or geographic locations.

The solution to disparate data sources is standardized BI that supports an open data strategy and uses a common metadata model.

Cognos 8 BI also enables a modular deployment, which lets IT avoid an “all-at-once” deployment that inevitably compromises data quality. IT can deploy Cognos 8 BI in stages and create feedback loops for users. This ensures data is accurate and consistent at every stage. A phased approach means IT can address data quality issues at the source, in a manageable way, before the information is delivered to end users.

FATAL FLAW NO. 4:

“OUR BUSINESS APPLICATION VENDOR WILL DELIVER THE BEST SOLUTION.”

Purchasing an ERP, SCM, or other enterprise application is one of the most significant investments that IT can make. It represents a capital expenditure in the tens of millions; it requires extensive due diligence on the part of the CIO; it requires executive sign-off; it takes years to implement and demands dedicated resources to maintain. And it must deliver a return.

Once such a purchase has been made, it is understandable that nobody wants to say that this multi-year, multi-million-dollar investment isn't going to give the organization everything it needs. Yet believing so is a common “fatal flaw” of BI.

The Gartner Cure

- Promote an understanding of what functions aren't delivered by ERP systems. Compare the functions included in the enterprise application's BI tools with tools offered by the leading vendors in the BI market.

The Cognos View

Most enterprise applications do provide some bundled BI capabilities. However, they are usually hard-wired to the vendor's proprietary data and deployments are limited to a few power users who understand the complex interfaces. This restricts business users to limited and inflexible views of business performance through a limited set of “canned reports.” This is a problem, because most business processes—supply chain, for example—involve a variety of applications that collect data using their own proprietary metadata models. To understand and manage performance, business users need to access all of this data and the ability to combine or analyze it in different ways.

BI must provide users with visibility across an entire business process, not limit them to a particular slice of the data.

Cognos 8 BI meets these needs in three ways: by integrating disparate, heterogeneous data into a single source of consistent information; by supplying a common metadata model that applies consistent rules, dimensions, and calculations to all data; and by providing the complete range of BI capabilities to report on and analyze it.

For users, this means the freedom and flexibility to move through data and capabilities in any way they need or want to, and the confidence that comes from knowing that definitions and calculations are consistent across data sources. Rather than be forced to work with a limited or partial view of information, users can view the performance of a process from start to finish and drill through reports and analysis at any point to analyze the factors that affect the outcomes. Cognos 8 BI automatically carries context forward throughout the process to ensure accurate results that drive better decisions.

FATAL FLAW NO. 5:

“DARWIN WAS WRONG: THERE’S NO NEED FOR BI APPLICATIONS TO EVOLVE.”

Until now, the typical BI deployment has been to provide a specific capability at the departmental level. Most of these deployments have been successful. However, many of the older applications that supported them are now straining under the weight of a growing user base, more complex IT infrastructures, and the demand for greater collaboration across business functions.

IT is also feeling the pressure—not only to maintain existing BI applications built on older architectures—but also to keep new initiatives “short and sweet” for a quick ROI. This means most BI projects are deployed in a disconnected fashion to meet immediate needs. The longer IT continues with this approach, the more problems they will encounter in the future.

First, the cost. While an isolated BI project may save money in the short term, the efforts needed to maintain a raft of isolated deployments and applications can erase these savings over the long term. Second, the difficulty of supporting and integrating a collection of BI applications from multiple vendors as business conditions and user needs evolve. Third, the poor decisions and duplicated efforts that result from fragmented information.

The Gartner Cure

- Departmental managers and IT staff should work together to stamp out redundant BI tools. Stop the proliferation of new tools by enforcing standardization for tools before they are deployed.
- Define a review/feedback process for ensuring that the BI strategy, investments and skills stay aligned with the overall vision and architecture, as well as business needs.

The Cognos View

First, IT needs to put an end to isolated, or “renegade” BI projects in favor of a company-wide BI standard.

This can be accomplished through a BI Competency Center, or BICC. As a centralized body of BI knowledge and expertise, a BICC can enforce a consistent set of BI strategies, tools, standards, and approaches across an entire organization.

Second, IT needs to plan its BI strategy for the entire organization to meet both current and long-term needs. As BI users become more numerous and more sophisticated, their BI environment must keep pace. Today’s users may simply need reports. Tomorrow, however, they may need to view reports in the context of a scorecard. Executives using dashboards may want to receive alerts. Power users in one location may need access to more data to compare performance in their area against that in other offices.

As BI users become more numerous and more sophisticated, their BI environment must keep pace to continually meet their needs.

Cognos 8 BI can meet immediate needs and has room to grow. It provides complete BI capabilities out of the box, with the added flexibility of modular deployment. IT can provide a BI environment that meets current needs, and activate new capabilities at any time down the road as user needs and business conditions change. Plug-and-play capabilities mean IT can do all of this without deploying and managing additional software.

Complete capabilities and modular deployment means IT can map out a long-term BI strategy that is aligned with and supports strategic goals. Deploying these capabilities from a single solution increases the value of the BI environment because it helps more and more people share and act on consistent information. With Cognos 8 BI, the entire organization can “work smarter.”

FATAL FLAW NO. 6:

“WE CAN OUTSOURCE THE WHOLE THING.”

Would an organization outsource its strategy? The question may sound foolish at first. But for executives looking to cut costs quickly, the range of processes that can be done by someone else and the resulting cost savings make outsourcing an increasingly attractive option. And organizations that view their BI as tactical—or simply too complex to be managed internally—may be tempted to let someone else do the job.

But there are risks in outsourcing BI. As it becomes more widely used, the cost savings an organization gains in outsourcing its BI may well be eclipsed by the agility, efficiency, and competitive advantage demonstrated by organizations that view BI as a core competency.

The Gartner Cure

- Remember the “golden rule” of outsourcing: Outsource only those things that are not a core competency or core business. Business strategy formulation and feedback on its results must be a core competency.

The Cognos View

The question is not whether or not to outsource, but rather, what functions *should* a company outsource? A “flawless” BI environment is the expression of a corporate strategy and the foundation of a performance management system. A pervasive system of interconnected metrics, reports, analysis, and alerts lets everyone in an organization see what it is trying to achieve, understand how it will achieve it, and know what every employee needs to focus on and do to make the strategy work. BI helps organizations avoid last-minute surprises—a capability that no high-performance organization should leave to someone else.

Cognos is putting this principle into practice using its software. Through the company’s *CPM@Cognos* initiative, employees have access to the corporate strategy map and scorecards that reveal performance against high-level metrics. Toward the end of each quarter, CEO Rob Ashe reviews can pipeline numbers in 15-minute intervals.

These capabilities provide Cognos executives with strategic information that often leads to direct and coordinated action. For example: the ability to monitor sales performance as it unfolds lets Cognos provide the investment community with reliable and predictable information. It can deploy extra resources where they’re needed to ensure performance targets are met.

BI helps organizations avoid last-minute surprises—a capability that no high-performance organization should leave to someone else.

FATAL FLAW NO. 7:

“JUST GIVE ME A DASHBOARD.”

Time-strapped executives and business managers are in constant need of quick and simple reports on corporate performance. Dashboards often win out over scorecards in the executive ranks because of the perception that a Balanced Scorecard implementation takes too long and is too complex to manage.

Dashboards are indeed attractive because they provide an at-a-glance view of performance across any number of key areas. People can see and act when performance is in the red. As a mechanism for managing performance, however, dashboards are of little value unless a) they reflect the actual drivers of business performance; b) they allow drill-through to the underlying data for further analysis; and c) the insights gained can be fed back into these dashboards and acted on in a closed-loop manner. These are the hallmarks of a performance management system.

The Gartner Cure

- If you have already implemented a solid data warehouse infrastructure, then a performance dashboard or complex scorecard is easier to create.
- Ensure that management uses a strategy map in conjunction with its scorecard or dashboard. A strategy map is a cause-and-effect diagram between the objectives—or performance indicators at a more detailed level—in a scorecard. If such mapping isn’t completed, the scorecard offers little more than a collection of unrelated metrics.

The Cognos View

Ownership, accountability, consistency, and collaboration are some of the key attributes of an effective performance management system. Organizations cannot achieve this if their dashboards and scorecards are not connected to the underlying performance data. Organizations need a performance management environment that provides everyone—from executives to front-line employees—with consistent information tailored for their specific responsibilities. An effective performance management system is also one in which definitions, targets, and thresholds are commonly shared and understood by everyone.

Organizations can create this system with Cognos 8 Business Intelligence. Its complete BI capabilities let organizations build high-level dashboards and scorecards with the vital connections to the underlying data. IT can create strategy maps that define strategic objectives and illustrate how key processes link, and then place metrics directly on top of them. People at any level of the organization gain a clear understanding of where performance is on-target and where corrective actions are needed. Each metric has an assigned owner to ensure that poor performance is not overlooked or does not go unaddressed. Guided analysis features place metrics in their proper context and lead users to the answers more quickly.

Dashboards and scorecards must be connected to the underlying performance data and share consistently defined targets.

Cognos 8 BI is a single product with complete BI capabilities. Users can directly access and analyze the underlying data to understand why performance is off-target. Embedded initiative tracking features help people inform or collaborate with others on a solution, or make the right decision on their own.

Cognos 8 BI can act as a single source of performance information. Executives can deploy dashboards, scorecards, strategy maps, and any related information consistently, across the organization to ensure people work from the same definitions and to the same targets.

CONCLUSION

Organizations are beset on all sides by a complex interplay of internal and external forces: the need for agility; the drive for efficiency; the demand for compliance, the complexity of IT infrastructures, and competitive pressures. On their own, each of these can negatively affect performance if the people responding to them lack the right information. Taken together, these factors demand of organizations a coherent, coordinated response that supports strategic business goals.

Organizations have responded to many of these forces with BI solutions at the departmental level. To a large extent they have been successful. BI has delivered better information at a lower cost; delivered insights into the factors that drive performance, and enabled better overall better business decisions. These benefits have been proven in numerous case studies and success stories.

With Cognos 8 Business Intelligence, however, organizations have the opportunity to extend these benefits across their entire organization and elevate the benefits to a new order of business performance. With Cognos 8 Business Intelligence, organizations can experience “flawless” BI that delivers consistent information that is the foundation of a performance management system.

Now is the opportunity for powerful change. A BI solution with neither limitation nor imitation, Cognos 8 Business Intelligence delivers on the full promise of BI:

Simple: One product. One modern architecture. Open integration.

Complete: All BI capabilities. For all users. From all systems and data.

Proven: Proven technology. From the acknowledged innovator and market leader.

ABOUT COGNOS

Cognos is the world leader in business intelligence and enterprise planning software. Our solutions for corporate performance management let organizations drive performance with planning, budgeting and consolidation, monitor it with alerts and scorecarding, and understand it with business intelligence reporting and analysis. Cognos is the only vendor to support all of these key management activities in a complete, integrated solution. Founded in 1969, Cognos now serves more than 23,000 customers in over 135 countries.

APPENDIX: FURTHER READING

For further reading on the Cognos Cures to Gartner's "Fatal Flaws," please read the Cognos White Papers listed below.

These White Papers are available to download free of charge at www.cognos.com

Fatal Flaw No. 1: "If we build it, they will come."

Read: *The Full Promise of Business Intelligence*

Fatal Flaw No. 2: "Managers need to 'dance with' the numbers."

Read: *Consolidation: Laying the Groundwork for Sustainable Compliance*

Fatal Flaw No. 3: "We don't have a data quality problem."

Read: *The Importance of Open Data*

Fatal Flaw No. 4: "Our business application vendor will deliver the best solution."

Read: *The Full Promise of Business Intelligence*

Fatal Flaw No. 5: "Darwin was wrong: There's no need for BI applications to evolve."

Read: *Architecture: The Foundation of Effective Business Intelligence*

Fatal Flaw No. 6: "We can outsource the whole thing."

Read: *The Evolution of the CPM System*

Fatal Flaw No. 7: "Just give me a dashboard."

Read: *Monitor. Manage. Perform: Scorecarding with Cognos 8 Business Intelligence*

For more information on Cognos 8 Business Intelligence, take a tour of our interactive online demo at www.cognos.com/cognos8-demo

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