Extending business intelligence with dashboards
Overview
Imagine being able to track the key performance metrics for processes, products or supply chains most important to you and then drilling down whenever you wanted to see transaction details most pertinent to your personal needs. You would gain key insights faster and be able to take immediate action on the decisions you contribute to for better business outcomes.

Now, consider the possibility of having the inventory metrics you need to review a problem in a distribution center (DC) on the spot without being connected to your business intelligence infrastructure. And, having someone at another DC in another country getting inventory metrics specific to that DC the same way. Or, being confident that everyone in a conference call with participants from all over the world has the same sales figures for a product that launched six months ago.

With the right kind of dashboards, all this is possible.

This paper reviews the benefits of dashboards in general and then shows how a new generation of business dashboards that meet specific needs can enrich business intelligence (BI) solutions and become an integral part of your business analytics arsenal.

“The main challenge is determining the appropriate end user tool to use to meet any specific reporting need and coordinating the requests with the various internal support groups.”

— David O’Keefe, IT manager for Honeywell International, Inc.
**Business challenges: Cracking the code of business intelligence**

It is no secret that business intelligence-fueled organizations make better decisions and perform better than the competition. Data that becomes information in context is a powerful force to align people in terms of what you want to achieve, to keep track of how you’re doing and help you determine how you can correct your course as conditions change (Figure 1).

So, why doesn’t every organization embrace dashboards as part of their BI approach?

The answer to that question lies in the common challenges associated with ensuring broad usage of BI tools and information:

- **Technical skills and training can be limited or bandwidth constrained.** Most decision-makers are not power users. Redesigning and streamlining functionality over disparate sets of tools to make the features more obvious is neither cost effective nor an efficient use of skilled IT resources.

- **The degree of needed interaction can vary.** Because the roles and the skills of decision-makers can cover such a wide range, some are comfortable using and working with BI tools independently, while others require significantly more initial and ongoing support.

- **Getting BI in the hands of all users is difficult.** In a 2010 SearchBusinessAnalytics.com survey, 58 percent of respondents said that they plan to roll out BI to more business users over the next year, but some indicated a concern over whether current BI tools could be tailored to meet the needs of all the different types of users.²

Dashboards can take the confusion and guesswork out of navigating the information provided by your BI and business analytics solution.
An important tool in your business analytics arsenal
Dashboards are one of the most effective ways of delivering BI quickly to people because they can help cut through the clutter of information that is available today. According to Louis Barton, a Frost Bank IT executive, dashboards add value by “reducing the cycle time it takes to analyze information. . . . You can make a decision sooner. That means people are more productive.”

Despite the many benefits to all employees in an organization, dashboards have still not ventured very far out of the executive suite. There is a perception that dashboards are “nice to have” when you can understand them. Many current dashboard solutions create a complicated experience that do not use best practices for data visualization and that can leave users confused and resistant to implementing them. Also, until recently, none of the different approaches to dashboard presentation (slide shows, graphs in spreadsheets, data warehouse reporting packages and third-party BI add-ons) was optimal for presenting a clear view of business.

The key to the successful use of dashboards is to recognize the different ways people interact with information and the different business realities they face. This approach is the foundation of a new generation of dashboards designed to meet the needs of all the users out there who need information that is most meaningful to them fast and in all types of formats, whether they are in the office or on a plane. Users receive personalized information or professionally authored reports in the form they need it without having to wait for IT to make changes or without being connected to BI infrastructure or even a browser.
A new generation of dashboards: The freedom and flexibility for everyone to explore and see relevant information in ways most meaningful to them

The true driver of success comes from putting information and insight into the hands of many different users. Because they have different experiences, roles and responsibilities, your employees need the freedom and flexibility to explore and see relevant information in ways that are most meaningful to them. Simple, familiar user interfaces should help them find answers to their own questions without changing tools or learning new applications as they expand their thinking. They should be able to view dashboards on their mobile devices and whether they are connected to BI infrastructure or not.

“I believe too much of the focus is still being placed on collecting, manipulating and managing data when it really should be put on how users interact with the data, and what business conditions they are trying to improve via this interaction.”

— Tom Gonzalez, Managing Director of BrightPoint Consulting, Inc.

Personalized dashboards: Limitless workspace

Personalized dashboards make it possible to:

- View, interact with and analyze information that is meaningful to you.
- Help others follow your train of thought and understand your unique perspective.
- Drag-and-drop trusted content, filters and other content, such as RSS feeds, HTML, text, and images.
- Modify and arrange layout, add colors and text, add comments and personalize widgets.
- Change display, add calculations, filter/prompt, drill up/down and sort data.
- Share dashboard objects for collaboration.

Several types of solutions can meet these needs: personalized desktop dashboard solutions (Figure 2), personalized, interactive dashboard solutions that are integrated into BI solutions and solutions that help produce a professionally authored dashboard once that can be shared with everyone who needs it. This new generation of dashboards moves BI content beyond the specialists who have used and benefitted from it for years and makes it available to everyone, no matter where they are, what application they’re using or whether they are connected.
With IBM Cognos® Insight, for example, users answer business questions independently, at the speed their business requires. In a few clicks of the mouse, users can access and visualize personal and corporate data, perform “what-if” analyses and publish dashboards and applications to help drive smarter decisions. With Cognos Insight users can:

- Quickly uncover new insights using a combination of trusted business intelligence data and reports, as well as local files, databases and predictive data.
- Get answers to business questions whenever and wherever they need them — no more waiting for reports and dashboards.
- Turn insights into action by modifying plans, forecasts and budgets to align the appropriate resources in support of your decisions.
- Add broader analytic capabilities such as managed reporting, financial and performance management and predictive analytics as their needs evolve.

**Self-service BI**

With Cognos Insight, you can:

- Import, combine and enrich data from multiple sources, without complex scripting.
- Easily demonstrate exceptions in your data.
- Go from raw data to analysis and a published dashboard in as little as 60 seconds.
- Model best-case, worst-case and most-likely outcomes based on your key business drivers.

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*Figure 2: An intuitive, easy-to-use interface provides complete user flexibility to independently create compelling dashboards and analytic applications.*
The principles of the new generation of dashboards

The following principles serve as an effective guide for understanding why a new generation of dashboards can help your organization manage performance better and create new opportunities for business optimization:

- **The new generation of dashboards recognizes that dashboards mean different things to different people.** There is no one size fits all and no single definition that applies across the board. The new generation of dashboards accommodates different comfort levels with technologies and individual roles. Close alignment between the user's role and the user interface enables productivity and acceptance.

- **The new generation of dashboards helps users turn insight into action.** A dashboard should provide all types of users with information they can use to move from insight to action quickly. It should enable an approach to exploring issues that can also predict potential outcomes and allow a course change (if necessary) before future issues arise.

- **The new generation of dashboards is open to new contexts.** The new generation of dashboards delivers views beyond the boundaries of standard BI products. Users can easily add new contexts — and, therefore new insights — to the information at hand and have the flexibility to add new data (such as market data) or adopt new visualizations to drive more insight and address new business questions. They can also see the information they need to in their choice of interfaces or applications so that they can make sense of it quickly.

- **The new generation of dashboards is easy to manage.** IT resources are scarce and valuable in most organizations and they don't have time for complicated dashboard management tasks. Users can also work independently on their desktops and then easily share reports with colleagues. For example, files can be shared via a server to make it easy for others to provide input and for IT to apply security and corporate standards. IT can then publish the files to the enterprise, where they can be further enhanced or managed at the corporate level.
The characteristics of the new generation of dashboards

The new generation of dashboards provides the right level of information in a format that makes sense to users and can be accessed any time they need it. They should not have to be connected to your BI infrastructure or a web browser—or be using a specific application. This is because business users don’t have days to spare to come to a decision. They must make the call almost as soon as an issue becomes apparent. The new generation of dashboards removes this roadblock by giving each person a “birds-eye” view of their role and letting them interact with content with these features:

- Rich graphics that make charts and gauges visually appealing to help quality information make the best impression
- Functionality for changing their views and updating them on the fly
- Self-service capabilities so IT intervention is rare or eliminated
- Role-based information delivery to ensure that each user assembles a dashboard only from reports he or she has clearance to access
- Integration with Microsoft® Office applications so users can work easily and comfortably with familiar interfaces
- Easy to personalize search tools (Figure 3)

The new generation of dashboards also takes into account the users who want interactive dashboards they can use to explore and analyze information without having to create or author them. For these users, there are “write once, use many” dashboards that are distributed in forms they can use, even if they are not using a web browser or connected to BI infrastructure.

Figure 3: Wired for the enterprise, personal dashboards allow individuals to visualize, explore, share insight and take action—all from the desktop.
The benefits of the new generation of dashboards

The new generation of dashboards helps users make decisions quickly, without any guesswork and without having to wade through irrelevant information. These dashboards provide an intuitive environment so people can request, edit and adapt dashboard content. This means users at all levels, from executives to employees in the field, can:

- Change the content or layout of existing dashboards without difficulty and frustration.
- Receive the dashboards they need without having to think about creating them.
- View content the way they prefer because there are no constraints on the type of content and how it is presented, other than security precautions.

Dashboards you can author centrally, consume anywhere

The new generation of dashboards offer more than just a workspace users can personalize; they also offer the capability to create a single report that users can access on multiple devices, in multiple formats and in other applications and processes. These types of dashboards make it possible to:

- Import and refresh BI content in Microsoft Office.
- Embed BI content in third-party applications and portals.
- Take reports with you on your mobile devices, including your iPad.
- Review and interact with content offline.
The new generation of dashboards also takes into account the different needs of different users:

- Executives can easily access an at-a-glance view of how their organization is performing and then quickly drill down to an appropriate level of detail, which will help them make fast, effective decisions.
- Business users are able to assemble information into a view that makes sense for them with the flexibility for deeper analysis to drive their decisions.
- IT administrators can enable an environment where trusted content can be centrally authored and accessed anywhere (Figure 4). This maximizes efficiency for IT and empowers your business.

**The new generation of dashboards integrated into your BI solution: IBM Cognos dashboard software**

The software in the IBM Cognos family unleashes the collective intelligence in your organization with personalized dashboards offered as part of Cognos Business Intelligence solutions, so everyone can see around corners, predict outcomes, make informed decisions and act smarter and faster than the competition. Users are provided with an interactive dashboard experience for a deeper understanding and improved decision-making where, when and how it is required.

“We use the IBM Cognos Business Intelligence dashboarding capabilities to track actual performance against benchmarks. The IBM Cognos dashboard also allows our decision-makers to view the interrelationships of complex statistical data from a variety of sources such as Cognos multidimensional data cubes, third-party cubes, managed reports or flat files in a single visualization.”

— Norm Costin, Vice President of IT, Blue Cross Blue Shield of Massachusetts

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**Figure 4:** The new generation of dashboards include those that can be viewed and interacted with offline.
IBM provides dashboard capabilities that allow any user to access, interact and personalize content in a way that supports the way they make decisions. Users can quickly move from insight to action. They also benefit from the power of their dashboard content with information they can trust, from their perspective, in their desired format.

Because dashboard capabilities are an integral part of IBM Cognos Business Intelligence, users can:

- Add, view and interact with and refresh dashboard content in Microsoft Office applications.
- View and interact with dashboards on a variety of mobile devices.
- Schedule, burst and distribute professionally authored dashboard content to a broad audience of consumers who need disconnected access to their dashboards.

With Cognos software, users get a full view of all data from all time horizons for improved decision-making. This includes access to IBM Cognos Real-time Monitoring for comparing dashboard views with up-to-date, actionable intelligence. Also, users can bring in predictive models with IBM SPSS solutions to provide views of predictive modeling to analyze past performance at a detailed level to plan future strategies and tactics more effectively. Dashboards can also include content from IBM Cognos TM1 for what-if scenario modeling.

**Conclusion**

The challenges of making BI more widely available to users in all parts of your organization can be resolved in part by a new generation of dashboards that are integrated into your BI solution. IBM Cognos dashboard capabilities enable any user to access, interact and personalize content in a way that supports the unique way they make decisions. We even offer reporting solutions that distribute professionally authored, interactive dashboard content to your broader user community that they can access without being connected. When everyone in your business is provided with a personalized, interactive dashboard experience, not only is your company better aligned, but everyone gains a deeper understanding of your business and where it is headed.

For more information about Cognos dashboards capabilities, visit [ibm.com/software/analytics/business-intelligence/dashboards.html](http://ibm.com/software/analytics/business-intelligence/dashboards.html)

Additional information about the Cognos family may be found at [ibm.com/software/analytics/cognos/](http://ibm.com/software/analytics/cognos/)
About IBM Business Analytics

IBM Business Analytics software delivers data-driven insights that help organizations work smarter and outperform their peers. This comprehensive portfolio includes solutions for business intelligence, predictive analytics and decision management, performance management, and risk management.

Business Analytics solutions enable companies to identify and visualize trends and patterns in areas, such as customer analytics, that can have a profound effect on business performance. They can compare scenarios, anticipate potential threats and opportunities, better plan, budget and forecast resources, balance risks against expected returns and work to meet regulatory requirements. By making analytics widely available, organizations can align tactical and strategic decision-making to achieve business goals. For further information please visit ibm.com/business-analytics

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